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AFFECTIONS OF THE NIPPLE AND BREAST INCIDENT TO EARLY LACTATION.

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(A Lecture delivered at Rush Medical College, Chicago.)

GENTLEMEN,—I propose to occupy the hour in considering some of the common affections to which the breast of the woman is liable, during early lactation. I may say that the management of the breast at this time is one of your most important duties in the lying-in-room; a duty that belongs exclusively to yourselves, and which should never be assumed by the monthly nurse. On account of the obstinancy at times of these affections, their successful management becomes one of your most perplexing cares; while their effect upon the sensitive parturient woman is sometimes so grave as to occasion you the greatest solicitude. But I hope to show that the care of the breast during the puerperal month is suggested by a few simple principles, which I shall endeavor to impress upon you.

To facilitate the study, I will speak first of the affections of the nipples, and second of the affections of which the breast proper is the seat. While this division will assist us in the class-room, you are not to infer that the separation of these affections is closely observed in practice. On the contrary, you will learn that the lesion to which the gland itself is most liable, is usually associated with, and dependent upon the affections of the nipple; and that the first cannot be remedied easily till the diseased nipple is cared for.

Before enumerating the several varieties of "sore nipple," as they are aptly called, the causation of these affections may be spoken of in a general manner. It has been often observed that women who are nursing for the first time, and those who have not nursed for a long time, are the special subjects of lesions of the nipples. This is because the cuticle covering the nipples becomes thin and tender from long disuse, when it is protected beneath the clothing from the influence of the sun and air. Some have said that women of blonde complexion are more liable to trouble from affections of the nipples than others; but I have never observed a marked difference in this respect.

There is a condition, however, which is intimately concerned in provoking these lesions; viz., that of bodily filth, and this, too, often in those women whose exterior gives assurance of quite another condition. During the last days of pregnancy there usually oozes from the nipple a few drops of fatty liquid, the imperfectly formed colostrum. The skin being for a long time covered with this matter, alternately dry and macerated, becomes tender and irritated, and ready to inflame as soon as the child is put to the breast. Even before the child is born, contact with the clothing may be sufficient to excite this inflammation.

Another determining cause of lesions of the nipple, is the undersize of the organ. The smaller the nipple, the greater the liability of having trouble during the first days of nursing; because the nipple is mumbled for a long time by the infant, in its efforts to keep its hold upon the organ.

In this connection, I may very properly speak of the ad-

vantages of putting the child very early to the breast, especially if the woman has small, or retracted nipples. The nipple is larger and more prominent just after labor, and is much more readily seized by the child than at a later date. If the putting of the child to the breast be for a long time delayed, until the breast is distended with milk, the small nipple is encroached upon, and retracted by the swelling of the breast, and seems even smaller than before, while the efforts which the child makes to draw it out will be painful and, for a long time, futile. Besides this, there is another consideration. The child is born with an instinct which enables it to nurse at the very moment of its birth. I have seen this instinct nearly extinguished by the usual delay in calling it into exercise; and the child has been forced to learn to nurse after many painful efforts. Unless an unusual degree of exhaustion of the mother positively contra-indicates such a course, I apply the child to the breast before I leave the house, during the first hour *post partum*. Such a procedure, as you know, has the further advantage of maintaining the uterus in a state of tonic contraction, which is the greatest safeguard against hæmorrhage after delivery.

The chief exciting cause of lesions of the nipple, is the mechanical irritation to which the part is subjected during the early days of nursing, under one or more of the determining conditions, of which I have just spoken. Practically, this is the only exciting cause which operates at this time.

A notion is entertained by many that certain irritating states of the secretions of the child's mouth, operate chemically in causing sore nipples. The affection called thrush, which is a fungoid exudation occurring in patches upon the tongue and inside of the cheeks, has been specially condemned, as the cause of the lesions in question. But I have never observed a single confirmation of this notion. Many women nurse a child with thrush, and escape sore nipples. And many others are the victims of these affections, whose children are free from thrush.

The division of affections of the nipple into several distinct varieties, which has usually been made, is of importance only

because of the different degrees of painfulness of these affections, and because of the several palliative measures that have been invoked for their relief. But so far as the causation is concerned, and the radical treatment, the classification is of little practical value. They may be enumerated in the following order:

Erythema is a congestion of the superficial structures of the skin; usually the entire covering of the nipple is attacked, and the areola is also sometimes involved. The part is swollen, red and excessively tender. It stands out constantly from the breast, and the slightest contact with the clothing occasions pain. Under appropriate treatment this simple congestion of the epidermis will subside. Or, inflammation occurring, an exudation takes place beneath the superficial layer of the skin constituting

Eczema, in which a variable number of small vesicles are found upon the areola or sides of the nipple. If the affected nipples are placed at rest, the contents of these vesicles become dry, and a little crust is formed which soon falls off, and the part is well. On the other hand, if nursing is persisted in, these vesicles are ruptured, and a little abraded patch remains, which soon becomes an ulcerating surface. Two or more vesicles may coalesce and become torn, thus forming a linear abraded surface, which is torn deeper by nursing, until the crack extends through the cuticle, and even deeper. This is especially liable to occur at the junction of the nipple with its areola.

The contents of the inflammatory vesicles just spoken of are usually clear, or but slightly cloudy. Sometimes, however, under very vigorous nursing, other little blebs appear upon the sides and apex of the nipple, which are filled with blood. These may also be ruptured, and their site be marked by an abraded or ulcerating surface. As the integument becomes toughened by nursing, these little ecchymoses fail to appear.

Fissures about the nipple will more frequently be brought to your notice than the lesions just named, because they are more painful, and yield less readily to the sometimes injurious expedient resorted to by the nurse. Lesions of this kind do

not usually occur till after you have given your convalescent patient into the charge of the monthly nurse. The pain, incident to nursing from the tender nipple, has been heroically borne till this time, when the part becomes cracked, and the woman has no longer the hardihood to persist in suckling her infant. You can have no adequate idea of the amount of suffering that the woman endures under these circumstances, until you have been told, as I have, that the agony of giving birth to the child was less than that of nursing.

Besides the pain, there is marked constitutional disturbance in the case of the woman. The appetite fails; she becomes discouraged and demoralized. Her night is disturbed, because in her fitful sleep she dreams of the cries of the child, that warn her of the time of nursing; and the dread of this rises constantly before her. Moreover, I have known the puerperal woman to have an elevated temperature, of even 103° F., which had no other explanation than the fissure of the nipple.

I have said that the woman has no longer the hardihood to nurse her child. This fact is of the greatest significance, for it determines another, and much more grave affection of the breast itself, of which I shall speak hereafter.

The direction of fissures is usually transversely across the nipple, at any point from the base of the organ to its tip. A common site is where the nipple joins the breast; though a nipple may be cracked high up on one side, and near its base upon the opposite. The length and depth of such cracks are variable; from the merest chap, scarcely long enough to be seen, to a clean-cut fissure, which nearly, or quite encircles the nipple, and threatens to amputate the part.

Fissures of this kind are so easily recognized, that they need never be overlooked. Simply putting the integument upon the stretch, is sufficient to reveal their exact site. But there is another variety of fissure not so readily seen upon inspection of the part; I speak of a fissure located upon the summit of the nipple. Most observers do not describe this variety, which actually occurs with the greatest frequency.

If the summit of the normal nipple is carefully examined, it will be seen to be surmounted by a score or more of cone-like

papillæ, separated by little furrows, or valleys. The openings of the milk-ducts may be seen at the bottom of these valleys. A certain degree of care is necessary in your examination, or a fissure of this variety will be overlooked. The woman experiences a smarting pain during, and after, nursing; and sometimes there is blood upon the lips of her infant; but the sensations of the woman do not enable her to locate the lesion. If your examination is limited to an inspection of the part, you, too, will fail to see the cause of complaint. Separate the papillæ with the end of your thumb and forefinger, and at the bottom of the little furrows, of which I have spoken, you will see the fissure. A strong light and the aid of a lens will assist you in finding the lesion. It may seem a slight affair, so far as its length is concerned; or it may be a long zig-zag crack, extending in and out between several papillæ. I have never seen this fissure extend to a greater depth than the thickness of the skin, though some writers have described it, in extreme cases, as cleaving the nipple nearly to its base.

The manner in which this particular fissure is produced is, I think, worthy of a word in passing. You know that a skein of from fifteen to twenty milk-ducts passes through the central portion of the nipple, to open upon its summit. This central portion is not capable of much elongation. But this cone is enveloped in a case of integument, with a layer of loose, fat tissue interposed, which is capable of a very considerable degree of elongation. Now, during nursing, the outside structure of the nipple is drawn outward, beyond the central portion of the organ; in much the same manner as a thimble is raised from the finger. But the comparison is not strictly true, for the integument is very firmly adherent to the summit of the nipple, and limits the drawing out of its envelope. Prolonged, or very forcible nursing, tears the integument upon the top of the nipple, and causes the fissure in question. I have noticed that the general direction of these fissures upon the summit of the nipple is upward, towards the median line of the woman. This fact is of interest, when we remember that this general direction coincides with the chink between

the jaws of the infant, when he is held in the usual nursing position.

I have already alluded to the general effect of severe lesions of the nipple upon the susceptible parturient woman: how she may become demoralized by pain, and the want of sleep incident to nursing, and the dread of nursing; and how you may fail to understand the cause of the elevated temperature, until you have examined her nipples. It may seem to you that the effects are out of all keeping with the trivial lesion which you find upon the part. Permit me here to caution you against thinking that the woman has too little cause for complaint. You will, I hope, remember that it is a real martyrdom which the woman suffers, who heroically nurses her child under these circumstances.

I come now to speak of the treatment of these lesions. When you read the medical journals more extensively, you will be astonished at the number of expedients and drugs which are, from time to time, recommended as specifics for sore nipples. While this very multiplicity of means embarrasses the reader who wishes to know how to treat these affections, it shows that the subject is sufficiently practical to be constantly before the general practitioner. It is not worth your time for me to attempt to enumerate the many details of treatment that have been offered. Fortunately, it is only necessary for you to burden your memory with but a few very simple principles of treatment.

Practically the radical treatment of these various affections is the same for all. Knowing that the immediate cause of these lesions is the mechanical irritation of the nipple, by the mouth of the child, there arises from this fact one indication of paramount importance; viz., to remove the organ from this irritation. This is the maxim in treatment which I cannot too strongly emphasize. Now, how can this be carried out? You cannot interfere with the function of one breast without compromising the gland. Nor can you partially empty both breasts, for the same reason. To remove the nipple from the cause of injury, at the same time to secure the safety of the gland, is the great desideratum. To accomplish this, a variety

of shields have been devised for the breast. They are all made to cover the nipple, as a thimble, and rest air-tight upon the breast, and are surmounted with a false nipple of caoutchouc. If aspiration is applied to the rubber nipple, an incomplete vacuum is formed in the shield, which is filled by the milk from the ducts. The most efficient, at the same time, the cheapest and most simple variety of nipple shields, is this plain bell-glass, with a broad base to rest upon the breast.[1] If the bearing surface of the shield is wetted with saliva or glycerine, it will fit upon the breast more tightly.

It is true that the use of this kind of cupping glass is not always free from pain, because it induces an engorgement of the nipple; but I know of no other way in which the nipple can be placed so nearly at rest, at the same time that lactation is kept up. The immediate relief and rapid improvement which have followed the temporary use of this means, in cases where all sorts of lotions and collodion coatings had failed, have often surprised me.

It sometimes happens that the child is not vigorous enough to draw the milk through the shield; then the aspiration should be made by an adult. In this manner the breast can be sufficiently emptied to protect it from trouble, until the lesion of the nipple has recovered. In the meantime the child can be sustained from the sound breast. Sometimes both nipples are the seat of lesions at the same time. Under these circumstances, if the child is unable to draw the milk through the shield, some other means must be devised, so that the milk may be saved for the infant. I now make use of that simple form of breast-pump, which is practically like the nipple-shield of which I have spoken. The bell-glass has a diverticulum, in which the milk is collected; and in place of the false nipple, there is a large rubber bulb, by means of which the vacuum is made. The milk can be poured from the receptacle, as often as filled, kept warm, and fed to the child with the spoon, or the simple nursing bottle.

This use of the breast-pump is the only use I ever have for it; I believe it to be its only proper use. If it were not neces-

1 Known as Maw's.

sary to collect the milk for the child, the simple emptying of the breast could be done much more safely through the nipple shield. In all cases, I believe it good practice to complete the emptying of the breast with the shield, after the pump has been used.

I have spoken at length of the means of protecting the nipple from the irritation of immediate nursing, because this is, by far, the most important indication of treatment. In the great majority of cases, nothing more than this is required to cure the lesion. Usually, however, there is associated with the ulcers and fissures of the nipple, an inflammation of the cuticle covering the part, which renders the organ excessively tender, and calls for palliative treatment. For this purpose you will find the use of the benzoated zinc ointment most grateful. Wash the part carefully with castile soap and water, and cover the entire nipple and areola with the ointment. It is not necessary to remove the ointment before drawing the milk through the shield. A few drops of carbolic acid, rubbed into the ointment seem to increase its efficiency.

For the very red, and highly inflamed nipple, I have found the solution of acetate of lead a very cooling and agreeable lotion. It is always necessary to wash the lead from the part before the milk is drawn, else, as has been said, the child will be injured by it.

At times the ulcers show an indolence which is easily corrected by touching them with lunar caustic. Ordinarily the ulcer needs only to be kept clean.

If the fissures are deep, and their edges are pulled apart by aspiration, occasioning great pain and a little hemorrhage, it is a useful expedient to glue the wound by coating it with collodion.

Holding as I do that, in the great proportion of cases of these affections, especially in primiparæ, the determining cause is in the fact that the nipple is undersized, I am led to speak of the means of correcting this condition before the end of pregnancy. You will not often have an opportunity of becoming familiar with the breast of the young woman before her confinement; but I have more than once, in the primi-

parous woman, seen a nipple which really did not project beyond the surface of the breast, but seemed rather withdrawn into the latter. Undoubtedly the usual habit of wearing corsets with breast pads is to be condemned as the cause of this flat nipple. If you are consulted, the entire condition is susceptible of change. I direct the woman, during the last months of pregnancy, to make traction upon the nipple with her fingers, at least twice daily. This method is much more effectual than the many varieties of air-pumps sold for the purpose. In fact, the use of these pumps should be interdicted, for they sometimes excite the breast to premature activity.

If you find this flat nipple for the first time after confinement, you may invoke the use of the old-fashioned vacuum to draw it out. A colorless glass bottle, holding a pint or more, with a mouth at least an inch wide, may be filled with hot water. After pouring out the water the bottle is to be inverted over the nipple. The atmosphere within the bottle becomes rarified, and a state of vacuity is approached as the bottle cools, which draws the enclosed part into its cavity. A new clay pipe, such as smokers use, is often used for the same purpose. When once the nipple is large enough for the infant to seize, it will be kept projecting by the efforts at nursing.

Associated with the small nipple, and in many others also, there is a degree of tenderness which is, as I have said, a cause of subsequent trouble. The long continued contact of alcohol does harden the cuticle, and render it less sensitive. Begin early in pregnancy to bathe the nipples and areolæ twice daily with bay-rum, cologne water, or diluted alcohol. The well-known domestic solution of borax, to which alcohol is added, I have found useful for this purpose.

The affection of the breast that you will frequently meet with in the primiparous woman, and exceptionally in others also, is an inflammation of the organ. Perhaps more has been written upon this than upon any other lesion, unless we except the so-called puerperal fever. It must be admitted that the subject is worthy of the attention it has received, because of the gravity of the general and local effects of the affection, and because an inflamed breast is often regarded as a reproach to the

attendant. While it is true, a breast may inflame and suppurate under the most skillful management, it cannot be denied that this result more often occurs under circumstances entirely preventable.

Inflammation about the breast is often thought to be connected exclusively with the puerperal state, or the function of lactation. This is an error. I have recently seen an abscess of the breast in a woman who had nursed her infant for more than a year. Moreover, a form of abscess is met with in newborn children, of both sexes ; and mammary abscess has been reported as occurring in adult males. These facts are sufficient to show that the breast may inflame independently of the special conditions of the newly delivered woman. We shall see presently, however, that exceptional inflammations of this class, have quite another significance than the usual cases occurring during convalescence from confinement.

But the inflammations of the breast of the lying-in woman are not always of similar causation and course. This fact leads to the division of mammary inflammation into two varieties, which I will describe, after calling to your mind some facts concerning the anatomical structure of the breast.

Each breast, as you know, is made up of from twelve to fifteen distinct, wedge-shaped lobes, arranged circularly in the breast ; the small end of the lobes looking toward the centre of the circle. These lobes, in their turn, are made up of many smaller parts, called lobules. Each lobule has an excretory duct, which joins the duct from the neighboring lobule; the whole uniting to form one common duct for that lobe. These grand canals from the different lobes, called the lactiferous ducts, converge toward the centre of the breast, where they turn upward and pass through the nipple, to open upon its summit, as has been already described. The lactiferous ducts do not anastomose with each other, but remain distinct throughout. Just beneath the areola, each duct suddenly dilates into a much larger canal, only to resume a still smaller calibre an inch nearer its opening. These dilatations are called milk-sinuses, and serve as reservoirs for the milk. Each lobe is a distinct gland, of the compound racemose variety, and may be

looked upon as a miniature breast, capable of executing its function independently of its neighbor. In fact, it does just this, when a part of the breast has been destroyed by disease.

But there is another tissue which enters largely into the formation of the breast, and which, so far as the present subject is concerned, is scarcely second in importance to the glandular structure just described. The different lobes of the breast are bound together by a quantity of intervening loose adipose tissue, which also covers the breast subcutaneously, everywhere upon its round aspect, except beneath the areola. It is the deficiency of the fat tissue at this part, that gives this disk a different hue from the surrounding covering. The breast itself rests upon a bed of loose cellular tissue, which attaches the organ to the fascia of the larger pectoral muscle.

From this it is seen that the gland tissue proper is everywhere enveloped in this loose cellular tissue, which sends down partitions between the smallest lobules. The great bulk of the breast is made up of this adipose tissue, which is so variable in quantity in different individuals, that one may have a large, and another a small breast. It is probable that the gland tissue varies but little in different breasts.

The fact of this double structure of the breast establishes a natural division in the inflammations which attack the organ, according as the glandular or the cellular structure is the point of departure. These varieties require separate consideration. I will speak first of that variety in which the glandular element is the starting point, known properly as—

Mastitis. The circumstances attending the establishing of lactation are such as determine an unusual amount of blood to the breast. This hyperæmia is shown in the increase in size of the organ. It is also harder to the touch, and so much heavier that it seems to drag away from its attachments as the woman lies in bed. There is a sensation of fullness experienced, at times amounting to positive pain. This local condition is sufficient to slightly elevate the temperature, and to accelerate the pulse. The term milk-fever is applied to this group of phenomena, about which the older teachers have

written so much; but whose very existence even, is denied by many modern writers. When you come to practice, and to observe everything about your lying-in patient as you should, you will be able to judge for yourselves, whether milk-fever is a real specific condition, or a chimera of the ancients. For my part, I believe it does exist. But I must warn you that milk-fever, at most, is only a slight, and transitory elevation of the temperature, not preceded by a marked rigor; and that any unusual departure from this rule, indicates some traumatism about the parturient canal, or phlegmasia within the pelvis.

It has been said that the great functional activity of the breast is sufficient to determine a true inflammation within the organ. I believe this conveys a most erroneous idea as to the causation of mammary inflammation. In no instance in the economy, is there such a lack of harmony between the end to be attained and the means by which it is attained. Under no circumstances will the physiological hyperæmia of a gland, end in suppuration, if left to itself. You will remember that the various glands within the body, of which the breast may be taken as the type, have a double function; viz., to furnish their peculiar secretion and to empty themselves through their ducts. It is only when the harmony between these two functions is disturbed, that inflammation is induced in the gland.

Now, with reference to the breast, it is an important fact that you may suddenly cease drawing milk from the organ at any time, or refrain from drawing the first secretion after confinement, and if the breast is left absolutely alone, it will not inflame. On the other hand, if the breast is partially emptied to-day, and a little less milk is drawn to-morrow, in the hope that the function of lactation will be gradually extinguished, the breast will almost positively inflame. The maxim is: it is safe to draw no milk from the breast, but it is extremely hazardous to incompletely empty the organ.

Let us examine the operation of this law. If the organ is left quite to itself, withholding all stimulants to the breast and nipple, I mean by this all stimulating friction and all efforts at aspiration through the nipple, a small quantity of milk will

escape spontaneously, probably enough to empty the reservoirs. The hyperæmia of the gland will subside, secretion will be rapidly suppressed, and the gland will gradually return to the condition of the organ before pregnancy. In a word, nature will observe the harmony between secretion and excretion, which is always safe for the secreting gland.

Let us suppose the opposite course to be followed, and the gland to be stimulated. By stimulating the gland I mean, first, the use of all means intended to draw the milk, either by immediate nursing (the infant or a pup) or by mediate nursing, (the breast-pump or shield); second, all frictions applied to the breast, or stimulating embrocations. All these measures cause the gland to furnish more milk than can be carried off. In a word, the harmony between secretion and excretion is interfered with.

These facts are strikingly confirmed in the lower animals. Who ever saw an abscess in the milk gland of the bitch, or cat? And yet the young of these animals are often taken from them without a thought! My teacher used to tell his medical class of a tender-hearted spinster whose cat lost her kittens upon the third day. The mistress, having a vague idea that her pet must suffer from distended mammæ, milked the cat for three days. The result was a mammary abscess—the only one of the kind on record. The domestic cow is not infrequently the victim of mammary abscess, when her calf is taken from her; but this is because she is milked. The buffalo cow, on the other hand, often loses her calf, but she is never milked, and hunters have told me that she never has mammary abscess.

To return to the woman. You have seen that nature has dictated the course to be followed. The danger to the breast is when the attendant follows an opposite course, and stimulates the breast to secrete more milk than can be drained away, because of some obstruction at the outlet of the milk canals. This leads to the inquiry, what is the nature of this obstruction? In other words, what is the real exciting cause which usually operates in obstructing the breast of the recently delivered woman?

I can have no doubt that the cause above all others is to be looked for in the graver lesions of the nipples, which have been described. The effect of these lesions is three-fold: First, the act of suckling gives the woman such pain that she is led to neglect her breast. Second, the inflammation of the epidermis of the nipple may extend into the duct itself, and thus occlude the latter. Third, the excessive irritation, of which the exterior of the nipple is the seat, may excite a spasmodic closure of the milk-ducts as they pass through the nipple; for in this part they are surrounded with muscular fibre. These latter complications are demonstrated in those cases where the woman heroically endures the agony of suckling, and yet the most forcible efforts at aspiration fail to draw milk from the breast.

Dr. M. O. Jones, of this city, narrated to me the instance of a woman under his charge, whose breast threatened to suppurate in one of its lobes. He was of the opinion that the affected part had not been completely emptied. After finding upon the top of the nipple an orifice corresponding nearly to the affected lobe, he passed a small probe, deep into the duct, which overcame the obstruction. Subsequent nursing relieved the breast, and the threatened abcess immediately disappeared. Perhaps with the aid of a lens to find the orifice, this quite original procedure of Dr. Jones, might be often used in practice.

You will hear much, in the lying-in room, of milk becoming curdled in the breast, so that it cannot be drawn. There is as little ground for this, as for many other phantoms pointed out by the nurse. I have often seen, when very forcible aspiration has been made through the nipple shield, little plugs of thickened milk drawn out, and have been led to ask if the milk, which is allowed to remain for a time in the reservoirs, does not become so changed as to obstruct the milk-ducts.

Besides this chief cause of glandular inflammation, you are not to forget that many other accidental causes, as for instance a blow upon the active breast, may operate to excite inflammation of the organ.

I have spoken at considerable length of the manner in

which glandular inflammation is set up, because if this part of the history of the affection is well understood, you can do much to arrest the calamity; and this is to be regarded a greater triumph of art than the skillful management of a breast already containing an abscess.

The symptoms of mastitis may be briefly enumerated. They are those of circumscribed inflammation elsewhere. Pain is present with the first evidences of congestion, and increases in severity, till the inflammation has culminated in suppuration, and the pus has been evacuated. It is described at first as an aggravation of that sensation of engorgement of the breast, which the woman has experienced before. It soon becomes sharp, and cutting, extending toward the shoulder, and down the arm. The pain of a highly inflamed gland is truly excruciating, depriving the woman of sleep, and soon exhausting her. In addition, there is a degree of tenderness of the part, which makes the slightest pressure unbearable, and limits your examination to the most careful handling of the organ.

Heat and redness are the concomitants of inflammation within the breast as elsewhere. The woman sometimes describes her pain as of a burning character. A surface thermometer applied to the breast would show the temperature of the part, elevated above the general temperature of the body.

Redness is not apparent in early inflammation of the gland. In fact a lobe within the breast may be inflamed for days, before any cutaneous redness is seen. It is only when the cellular tissue is involved with the glandular, that the inflammation is superficial enough to redden the skin. The absence of cutaneous redness is one of the features which distinguishes true mastitis from superficial cellulitis.

Swelling of the breast is noticed in the earliest inflammation of the gland. But the breast also is greatly enlarged when it is only engorged to a physiological extent. Very often, in the case of the lying-in woman, you will hear of "the breasts beginning to cake," and of a threatened "bealing" in the organ. This occasions the nurse much solicitude.

She means that there is a circumscribed tumor within the breast, which she fears will end in suppuration. Now, these cakes are of common occurrence throughout the course of lactation. They should never, however, persist after a good nursing. If the cake does not disappear after the breast is emptied, it indicates the beginning of inflammation.

The swelling not only makes the individual lobe more distinct and enlarged, but the entire breast protrudes more—in an unsymmetrical manner—when but one lobe is the seat of the inflammation. The skin over the affected part becomes tense, shiny and white. With mastitis there is the usual sympathetic swelling and tenderness of the lymphatic ganglia within the axilla.

Beside the foregoing local effects of mastitis, the woman experiences the general disturbances of inflammation. Shudderings often occur during the establishment of lactation. These persist, and become more frequent as the physiological engorgement shades into incipient inflammation. The temperature is elevated, and the pulse accelerated. The woman has flushes of heat, and sweats profusely at night. A well marked rigor usually ushers in the formation of pus.

The *ensemble* of these phenomena is such as to seriously interrupt convalescence in the puerperal woman, and to impress the attendant with the gravity of the affection.

Cellulitis. The second variety of inflammation of the breast is an inflammation of the cellular tissue, which everywhere pervades the organ. That cellulitis may occur independently of glandular inflammation, is shown by those instances of furuncular inflammation in the breasts of women who have long ceased nursing, many months after confinement, in infants of both sexes and in men. But puerperal cellulitis may occur independently of glandular inflammation, as I have more than once verified.

Beside the general determining causes of furuncular inflammation that operate with some subjects, as for instance, those with scrofulous dyscrasia, there are many special causes of mammary cellulitis. A blow received upon the breast, even a long time before lactation may be sufficient to light up an inflam-

mation when the breast is in a state of great activity. Writers speak of a miasmatic cause of this affection, which operates one year and not the next. But the exciting cause which operates in the great majority of cases, is an inflammation of the gland tissue proper. Under these circumstances mammary cellulitis is to be regarded as periglandular inflammation. In this connection I may state an observation suggested by a case. The gland tissue may be the starting point of inflammation which subsides after the process has been communicated to the cellular tissue and only the latter suppurate, the lobe escaping.

Now, any portion of the cellular tissue of the breast may be the seat of inflammation. This has given rise to the three distinct varieties of cellular abcess described by writers; the subcutaneous, glandular, and subglandular. Practically, it is of little importance whether the cellular tissue immediately beneath the skin, or an inch deeper in the breast, is inflamed, provided the abscess points externally. But that form in which the pus is pent up between the gland and the pectoral muscle, has a greater claim to be considered separately.

The symptoms of phlegmonous inflammation in the anterior half of the breast, are those of glandular inflammation of the organ, though less severe. Pain especially is much less noticeable. I know a lady who had six phlegmons in one breast, and four in the other, who scarcely complained of pain. A slight rigor would give warning of the successive abscesses. In this case the function of the breast was not apparently disturbed.

Unless the inflammation is deep in the breast, the skin over the inflamed part very early looks bluish-red. The swelling of the organ is not great, except in case of multiple abscesses. As a rule, cellulitis of the breast runs its course much more rapidly, and with less general and local disturbance, than mastitis.

In that form of mammary cellulitis called sub-glandular, the inflammation may have originated in the bed of loose tissue upon which the gland rests; or it may have extended from some point of the inter-lobar tissue, deep within the breast.

The early recognition of this variety is attended with much difficulty. The recurring rigor, or constant chilliness, indicates inflammation, which the pain locates within the breast. But there is no redness of the skin, and if the organ is palpated from side to side, no great pain is caused. But press the organ down hard upon its bed, and a sharp, cutting pain is elicited, quite characteristic of the lesion. Soon the breast is protruded by the engorged vessels at its base and the accumulation of pus, and the case is no longer obscure. The organ may be increased to three times its natural size. The swelling is not confined to the breast. I have seen the front and side of the thorax, and the corresponding shoulder and arm, extremely œdematous in a case of sub-mammary abscess. When a sub-glandular abscess has pointed, usually upon the lower margin of the breast, the skin becomes bluish-red; but until this time the covering has been uniformly white and waxy.

I have deferred speaking of the treatment of mammary inflammation till this time, because certain principles of treatment apply to both glandular inflammation and cellulitis.

An important enquiry is at once suggested: Will the inflammation amount to suppuration? If it is of the cellular variety, and accompanied with enough disturbance to place the existence of a phlegmon beyond question, especially if there is a circumscribed redness of the skin, I believe that suppuration is inevitable, even if it has not already taken place; and time should not be expended upon measures called antiphlogistic. On the other hand, a lobe of the glandular tissue may be hard, well defined and present evidences of incipient inflammation, and still not suppurate.

If either variety is recognized early, put the patient upon a low diet, and keep the bowels moderately relaxed, unless some more important puerperal condition precludes such a course. Much can be done locally to palliate, and perhaps to cut short the inflammation. Ice, or ice-water is often agreeable, and I have seen it effectual. Remember, however, that if you make cold applications to an inflamed breast, great caution must be observed. If the cold is withdrawn too soon, the severity of the inflammation is increased by the reaction that follows, and

the end of that case is worse than the beginning. The following evaporating lotion may be used, however, without restrictions, and I have found its effect cooling and grateful: Dissolve fifteen grains of muriate of ammonia in an ounce each of dilute acetic acid, alcohol and water. Two thicknesses of muslin are to be wetted with this lotion, and kept applied to the part.

In inflammation of the gland itself, certain measures have been much extolled, because of their supposed effect in resolving the inflammation; viz., friction over the inflamed lobe, and the use of drugs. Of the first, I can say that I have rubbed the breast after the most approved fashion, and while I have imperfectly emptied the breast by this means, I am convinced that the inflammation was aggravated. Rubbing stimulates the gland to increased activity, and if there is any obstruction to the flow of milk, you have increased the danger.

The drug named phytolacca decandra, which is the "garget-root" that farmers give to cows under like circumstances, has been recently much employed in arresting glandular inflammation. In the single instance in which I know of its being tried, the process of inflammation was unusually slow, still it ended in an abscess. In giving such medicines you are not to forget that they usually disturb digestion, which fact more than offsets the uncertain effects of fallacious specifics.

The end which you are to have in view, is keeping the breast safely empty. Under most circumstances you can accomplish this by putting the child early and frequently to the breast; or, if the efforts of the child are too feeble, invoke the aid of an adult, through the shield if mediate suction is precluded. By this plan you will often be gratified to see a breast become soft that had been given over to suppuration.

If the lesions of the nipple constitute an obstacle not overcome by these means, the case is most unfortunate, and I think quite exceptional. The attendant is in a dilemma. Upon the one hand is the almost certain occurrence of abscess, because the gland is distended, and, upon the other, the lesions of the nipple which prevent nursing. Dr. Bedford has aptly called this being placed between Scylla and Charybdis. If such a case is presented to me, where the child and the adult fail to

draw milk through the closed ducts, I would not hesitate to etherize the woman, which will relax the spasm of the ducts, and make powerful suction through the nipple. Failing in this, I should, with a lens, seek the orifice of the ducts involved, and pass into them a lachrymal probe, as Dr. Jones did.

In conjunction with these measures, I have for four years been accustomed to apply a binder very tightly about the thorax, wide enough to include the whole of both breasts, sometimes putting a sponge over the inflamed part, under the binder. This serves as a sling, which supports the heavy, tender breast, and, by compressing it against the ribs, lessens the engorgement of the organ. The bandage may be removed long enough to permit nursing from the breast, which is better than letting the nipple through an aperture in the binder.

In this connection I may say that when the child is weaned, or when the child is born dead, I never use any other measüre to prevent mammary inflammation, and have never seen an abscess under these circumstances.

The treatment of mammary inflammation when suppuration is inevitable, may be summed up in a few words. You may know that the abscess has begun to form, when all the symptoms indicate increasing severity of the process: recurring rigors, rising temperature, and increased pain. Under these circumstances you will aim to make the suppuration as rapid as possible. Cover the breast with a thick, hot poultice, of flaxseed meal, spread upon oiled silk, or other impervious material, and change every third hour. A drachm of laudanum may be poured on that part of the poultice covering the abscess.

As soon as the pus has become subcutaneous it should be evacuated. Here let me caution you against making uncertain incisions into the breast. A good rule to follow is, wait until a circumscribed redness of the skin indicates the focus of the abscess. If your finger is passed over the deepest colored part of the cutaneous blush, it will reveal a crater just beneath the integument. At this point you may safely evacuate the pus, using a stiff-handled bistoury for the purpose, and plunging the blade to the depth of half an inch. It is desirable that no part of the areola should be included in your incision. It may

be that your incision has opened a branch of the milk-duct, and milk flows out with pus. This is especially liable to happen if the abscess is near the areola; and this has been called a milk abscess by some writers.

Concerning the future of the breast the seat of abscess, it is well for you to know that the lobe which has suppurated will probably never again perform its functions.

In case of sub-glandular abscess, it is a triumph if you have early detected the presence of pus. An exploring needle passed into the tissue beneath the gland will aid you in this. If the exploration reveals pus, pass a probe or director into the track of the needle which will guide the knife. If this abscess is long neglected, the pus may burrow downward, and point far below the breast. I have attempted the evacuation of mammary abscess with the pneumatic aspirator, with the most unsatisfactory result.

I trust that I need hardly indicate to you that the subsequent management of each individual case will be suggested by your knowledge of those principles of surgery, in which you are so well instructed.

116 Vincennes Ave., Nov., 1877.

INTRA-CAPSULAR FRACTURE OF THE NECK OF THE FEMUR. RECOVERY.

By H. Wardner, M. D., of Cairo, Ills.

[A case reported to the Southern Illinois Medical Association at Anna, June, 1877.]

Medical literature seldom furnishes a record of intra-capsular fracture of the femoral neck occurring in a young person. It is even asserted by most surgical authors that it does not occur. Yet a few cases have been reported, showing that there are exceptions to this as to most general rules.

There may be interstitial changes resulting from disease, or injury, or both combined, by which the power of resistance in the bony structure is so diminished, as to render the person liable to the accident from apparently trifling causes.

The following case of a patient, to whom I was called on the 1st of December, 1876, was undoubtedly one of this class.

The subject of the accident was a lad between fourteen and fifteen years of age, of rather delicate constitution. For a year or more he had suffered from a "fever sore" on the left leg, involving to some little extent the integrity of the tibia, but from which he was recovering at the time.

On the 5th of November, 1876, he was playing with two other lads who had hold of one end of a rope, he having hold of the other and being in the rear, when they all ran down a declivity two or three feet in extent. When the patient came to the edge, the boys in front suddenly jerked the rope, so that he partly jumped and partly fell down the declivity, striking however, upon his feet.

He at once perceived that he had injured the right hip, yet was able to walk to his home, and subsequently to move about, doing light work, upon one occasion even holding the plow. Although he walked with some difficulty, and in an un natural manner, he continued to exert himself to this extent for twenty-four days.

On the morning of the 29th of the same month, upon attempting to get out of bed, one foot became entangled in the bed-clothing, and this led him to exert forcibly the adductor muscles, when he suddenly cried out with pain, saying his "hip had gone out of place," and he found himself unable to rise.

Dr. H. S. Smith, of Blandville, Ky., was at once summoned. Upon the supposition that a dislocation had been produced, he made efforts at reduction, but without success.

On the 30th Dr. D. P. Juett was called in consultation, and he diagnosticated dislocation of the head of the femur upon the dorsum ilii. The patient was anæsthetized with chloroform, and repeated attempts were made at reduction by manipulation, using the femur as a lever, but so unsatisfactory was the result, that it was decided to secure further advice.

In answer to a note from Dr. Juett, I visited the patient on the evening of the 1st of December, with a view to consultation with that gentleman and Dr. Smith. I found the lad

lying upon his back suffering severe pain. Considerable inflammation had been excited by the attempts at reduction.

The leg was shortened from one to two inches, lying nearly paralell with the opposite limb, the toes everted.

The trochanter of the affected limb was between one and two inches higher than that on the sound side, and turned backward so as to lose the prominence seen in the natural position. It rotated with the limb, so as to describe the arc of a circle somewhat less than natural, but not to a marked degree. There was no effusion or apparent injury to the soft parts about the trochanter. In consequence of the previous attempts at reduction, the parts had become very sensitive. After chloroform was administered, I seized the limb and found it very mobile and easily extended to the full length, when its aspect became entirely normal. A dull crepitation was distinctly recognized in the joint.

The diagnosis of intra-capsular fracture of the femoral head was established, and the treatment adopted at the time, and subsequently continued, was as follows: The patient being placed upon his back on a smooth bed, the foot of which was elevated about four inches, a splint, made after the manner of Hodgen's extension apparatus, was applied to the limb which was elevated ten to fifteen degrees, or until the extending force became sufficient to overcome the shortening, so that when a straight rod four feet long was applied against both heels, it was perpendicular to the axis of the body. The hip now assumed a natural appearance, the trochanters corresponding in position and prominence, and the fragments were thus believed to be in apposition. A wide flannel bandage was then snugly applied about the hips. The lad now said he was free from pain and soon fell asleep. The extension was kept up continuously for fifty-five days. On the fortieth day, a plaster of Paris dressing was applied about the hip, so as to prevent motion, the extending apparatus being removed fifteen days later. The plaster dressing was removed on the seventy-second day, and he was furnished with a pair of crutches. His health remained good during the entire time of the confinement. Dr. Smith writes me that he saw the patient

on the 17th of March, 1877, when he was walking by the aid of his crutches. The injured limb was of the same length as the sound one, and no deformity of any kind was detected. On the 1st of May following, he was reported able to walk without crutch or stick. His friends, who were quite intelligent, appreciated the importance of the case, and expressed great satisfaction at the result.

The interesting features of this case are: the age of the patient; the time from the original injury to the date of the complete fracture; the mode of treatment; and the result.

As to the age in which this fracture occurs, Dr. Gross says: "Experience has shown that it (the neck of the femur) is subject to fracture, as a general rule, only after the age of fifty, when its spongy and compact tissues suffer from atrophy and fatty degeneration, thus rendering it more or less brittle and incapable of withstanding injury."

In a collection of 250 cases made by Sir Astley Cooper, the youngest patient was thirty-eight years old.

Erichsen refers to a case reported by Mr. Stanley, occurring in a young lady of eighteen years.

Dr. F. H. Hamilton mentions four cases of suspected fracture, or separation of the epiphysis, in persons aged respectively eleven, eighteen, sixteen, and fifteen; but he remarks that "at least one dissection is required to confirm the diagnosis in any of them."

Authors in surgery inform us that the fracture may be denticulated, or the fragments so dovetailed together, that they may not separate for some days; or we may have an impacted or partial fracture, especially in younger persons, in whom the animal constituents of the bone are abundant. The latter injury is more apt to occur when the force is received in or near the line of the axis.

This patient received the force of the fall or jump upon his feet, he did not fall upon his side. The neck of the bone at his age forms an obtuse angle with the shaft of about 135 degrees, so that the force was spent upon the neck rather in a longitudinal direction, than transversely. There was probably a partial fracture at first; but whatever the injury may have

been, repair did not follow as soon as might be expected in a patient of his age; on the contrary, it was followed by pathological changes which rendered the bone brittle and easily broken, as it was.

In the treatment of this fracture, as of all others, two principal indications are to be kept in view; viz., apposition and fixation.

By suspending the limb in Hodgen's splint, the extension is principally made by its own weight, the counter extension being made by the weight of the body.

We can thus secure a constant and equable extension, and the patient can be allowed some liberty of motion and change of position, lessening very materially the danger from bed sores.

The bandage was first applied about the pelvis, without the plaster, so that frequent observation could be readily made of the parts, lest erysipelatous inflammation might follow the injury after the several attempts at reduction.

The plaster dressing well applied will keep the joint quite immovable.

By the extension, and plaster dressing, the fragments were kept in apposition until bony union was complete.

THE PLASTER OF PARIS JACKET IN SPINAL DISEASES.

By Edmund Andrews, A. M., M. D.

[Prof. of Surgery in the Chicago Medical College.]

The repeated inquiries made by physicians respecting the use of plaster of Paris in constructing supporters for spinal disease, show a widely diffused interest in the subject. I have therefore prepared this article to answer the numerous questions addressed me from different sources.

The therapeutic principles involved in the use of the plaster of Paris jacket, are the same as for other spinal supporters, and may be stated as follows:

1. Pott's disease is an inflammation limited almost invariably to the bodies of the vertebræ, and not affecting the articular processes behind them.

2. Hence it is that the bodies only soften and yield to the compression of the vertebræ above, while the articular processes behind remain firm and unchanged, in consequence of which the spine bends at an angle or a short curve, with its concavity forward and its convexity backward.

3. Curative apparatus acts in three methods; viz., (a) as a splint to correct or arrest the deformity; (b) as a means of securing immobility; (c) as a lifting power to take off the weight resting on the diseased vertebræ.

Any firm, broad splint applied to the back may act favorably to prevent the further flexion, and to secure immobility. The action of the plaster of Paris jacket in this respect, like that of all other supporters, is too obvious to require explanation. There is, however, one curative element in the splint principle which is very generally overlooked. Inflammation of the vertebral bodies is usually kept up solely by mechanical irritation; that is to say, by the jarring, the rocking and the pressure of the vertebræ above pressed down by the entire weight of the superior portion of the body. If this mechanical irritation be taken off, almost all cases will recover from the inflammation spontaneously. Now let it be borne in mind that the articular processes are free from inflammation, and are located on a line considerably posterior to the bodies of the vertebræ. It is evident at a glance, therefore, that if any supporter is so constructed that by its splint power it shall flex the spine firmly backwards, it will throw the weight of the vertebræ upon the articular processes, and take it off from the inflamed bodies of the affected bones.

The direct lifting power of spinal supporters is often overestimated. In small children it amounts to almost nothing, because their hips are smaller than their waists, and there is no basis on which to rest a support for the lifting power. In adults, however, and especially in women, the expansion of the hips gives a counter support, and lifting becomes possible. It may be well to remark, just here, that the old attempt to

lift by pressure in the axillæ is abandoned by all good surgeons. The axillary plexus of nerves is intolerant of all continuous pressure. A lifting force applied there with sufficient vigor to accomplish anything, soon paralyzes the arms. In spite of this fact, however, the instrument sellers continue to vend, and physicians to buy absurd pieces of apparatus, even for young children with no expansion of the hips, pretending to lift by crutch pieces in the axillæ.

The only lifting power possible (except an occasional head-stretch), is by embracing the double cone of the waist in something resembling a corset, and this the plaster of Paris jacket accomplishes in cases of adults. The principle is simply this: The waist being the smallest part of the body, anything like a firm, well fitted corset, or the plaster jacket firmly laced on, tends strongly to crowd the cone of the hips downward, and the inverted cone of the rest of the body upward, thus making a decided extension on the middle of the spinal column. It is for this reason that firm corsets, well laced, are a comfort, and actually a benefit to women with incipient Pott's disease. The plaster of Paris jacket acts both as a corset and as a splint, thus fulfilling both indications, acting in that respect like the combination brace, which I have for years been in the habit of applying to cases of Pott's disease.

The most approved method of applying the plaster jacket, requires the following articles to be prepared:

1. A pair of pulleys to suspend the patient.

2. A suspension bar, or rather a sort of whippletree of steel or strong wood, suspended by the pulleys in the centre, and having two notches or hooks on each side, one five inches and one eight inches from the centre.

3. A sort of band or collar of soft stuffed leather to surround the base of the skull, capping the end of the chin in front and passing beneath the occiput behind. Straps pass up from this on each side to the suspension bar.

4. A pair of axillary pads or bands suspended from the centre notches of the suspension-bar.

5. A quantity of roller bandages of coarse cross-barred crinoline, whose meshes are rubbed full of good, dry, fresh plaster of Paris.

The patient is now slung up by the arm-pits so as to hang from the suspension-bar on the axillary bands. To give the spine itself a special extension, the head-sling is also applied and buckled up so as to sustain part of the weight of the body. The axillary bands should be connected together by cross straps, so that by no accident can the child slip down out of them, leaving the whole weight to come on the neck.

A common knit shirt should be on the patient's body, and the plaster of Paris bandages should have already been placed in warm water to soak. It is also well to place a strip of cotton wadding along the more prominent portion of the spine, to prevent pressure on subcutaneous points of bone.

Now commencing as low down as can be done without impeding flexion of the thighs, the bandages should be applied over the whole trunk as high as the axillæ, in several successive layers. Sometimes it is well to enclose in them a number of perpendicular strips of perforated tin to obtain additional strength. When the plaster sets, the whole will become one rigid stone jacket, holding the patient firmly in position. Strange to say, this petrified envelope does not generally embarrass the breathing, though I have seen one or two exceptions to the rule. Before applying the bandages, a compress of cotton batting is applied to the lower half of the abdomen, beneath the shirt. After the plaster is hardened, the compress is removed, thus furnishing space for abdominal respiratory movements.

The apparatus can be applied in less elaborate fashion if desired. Thus, instead of suspending the patient by pulleys, three assistants can hold him horizontally face downwards by the thighs, arms and head. In this position the weight of the body causes it to settle down in the centre, thus flexing the spine backward in a desirable manner. It is not absolutely necessary to use cross-barred crinoline, as any thin loose fabric will do. I have also seen very effective jackets applied by coating three layers of cotton flannel with wet plaster, wrapping them around the body, and confining them with an ordinary roller bandage. The patient is held meantime in a suitable position until the plaster sets.

Cases of lateral curvature can be treated by this apparatus with considerable efficiency, but its main use is for Pott's disease.

In answer to the often repeated question, what estimate should we put upon the usefulness of the plaster jacket, I would say as follows:

Like all other useful things, it has both advantages and disadvantages. The advantages are as follows:

1. Cheapness. It costs next to nothing for material, though it consumes considerable time on the part of the surgeon. The cheapness enables one to apply it to numerous cases where poverty prevents the parties from paying $25 to $40 for a regular supporter.

2. Ease of construction. Any well educated physician can apply it himself however remote he may be from instrument makers. This is a very material advantage, for in order to reach an instrument maker, many patients are obliged to travel hundreds of miles, because the attempt to construct an efficient spinal apparatus from measurements sent by mail without the personal presence of the patient, is almost always a miserable failure, and the expense of the trip is often greater by far than that of the apparatus.

3. Perfection of the fitting. The plaster being applied wet, molds itself perfectly to the form, so that a "good fit" is easily obtained.

4. Efficiency. Where the deformity is situated in the lumbar or lower dorsal region, the plaster jacket has a control over it fully equal to that of any appliance ever used.

The disadvantages are as follows:

1. The jacket cannot be often changed without involving an expense for the surgeon's labor, which would soon be far greater than that of a good supporter. Hence, while wearing it, the patient is deprived of the use of his baths, somewhat to the detriment of his health. Sweat, however, does not accumulate, owing to the absorbent power of the plaster, but considerable decomposing cuticular matter accretes on the skin which cannot be removed. To a certain extent the advantages of easy removal can be obtained by foregoing those which re-

sult from carrying the plaster entirely around the body. A carapace, or "turtle shell," as Sayre calls it, may be made by putting several thicknesses of cotton flannel and plaster, strengthened by strips of perforated tin, upon the posterior half of the body and binding it on by a roller bandage. When this has hardened it can be enveloped in a jacket of cloth fitted to the body and made to lace up in front, and can be removed for bathing purposes as often as desired. The plaster portion of the apparatus not being strengthened by continuity in front, must be made pretty thick and strong, but it often serves a very good purpose. This form of the jacket has merits, but yet it has fallen for the most part into disuse.

2. The plaster jacket, in its original form, is only applicable to deformities existing below the level of the border of the axilla. On Pott's disease above that level it has but little effect, as the jacket cannot effectively be carried any higher. However, by the help of a mechanic, steel splints like those of a regular spinal supporter can be imbedded in the plaster and carried up high enough to apply shoulder straps, or even a head-stretch, but this is not much easier nor very much cheaper in the long run, than a regular brace.

3. The plan of suspending part of the weight of the patient by the head, involves a danger if the surgeon is at all careless. All joints of the body are liable to congenital or acquired laxity of ligaments, and the upper cervical articulations are no exception. If the surgeon chanced to have one of these relaxed cases in his suspension-sling, and by any inadvertence of himself or of his assistants, should bring too strong a tension in the head-straps, the horrible accident of a dislocation of the neck might easily occur. Great care should be taken to guard against this possibility.

From these considerations, it is evident that the plaster of Paris jacket is a very valuable appliance in numerous cases, and has the especial merit of being an extempore apparatus which can be applied however remote the patient may be from instrument makers, and however impoverished he may be in purse. It has, however, some special disadvantages, and at its

best, is in no way superior to a well-fitted combination brace, containing the corset and the splint in one instrument. Indeed the superior convenience and tidiness of the combination brace will always cause it to be preferred by a large portion of surgeons and patients.

No. 6 Sixteenth St., Chicago.

CASE OF SPONTANEOUS GANGRENE.

By Abner Hard, M. D., Aurora, Ill.

[Extracts from a Paper read before the Fox River Valley Med. Asso'n, July 2d, 1877.]

Cases of spontaneous gangrene are not of frequent occurrence in country practice, though occasionally met with as a result of embolism, or disease of some of the arteries or veins. The case to which I call your attention at this time, seems to possess unusual interest, from the many members involved and the apparent absence of arterial disease. In the medical works to which I have had access, I have been unable to find a corresponding case.

April 30th, 1877, I was summoned to attend Miss M. N., aged sixteen, small in stature, but of bright intellect; not physically developed more than girls usually are at the age of twelve or thirteen years. She has never menstruated, nor exhibited other signs of sexual maturity. Her father is living and healthy; her mother died at the age of thirty-seven, of uterine tumor. She has been living in the family of her aunt, and attending school for two years, having been always considered very healthy. During the past winter, she has been troubled with an urticarial eruption, appearing and disappearing, accompanied with itching. It did not make her ill, nor cause any uneasiness in the minds of her friends. On the 17th of April, she complained of headache, and did not attend school on that, nor on the following day. April 19th, the rash reappeared, and she took a cold water bath. The rash at once disappeared, and she felt sick and faint, but returned to school.

It reappeared each evening, until April 26th, when the ends of her fingers and toes became swollen, purple and painful. She came to Aurora and consulted a homœopathic practitioner, who called it "erratic erysipelas," and prescribed for her. She returned to school, but grew worse, and on Saturday, April 28th, Dr. Hawley, of Aurora, was called, and prescribed. She had no other medical attendance until my arrival, April 30th. I found her suffering excruciating pain in both hands and feet, which were black and swollen. The black color extended to the middle of the hands and feet, from which it shaded off into red, and then to the natural color. The extremities of the fingers and toes were senseless; but no line distinguished the dead from the living tissues. Except for a short distance from the ends of the extremities, the integument only was involved. A needle thrust into the tissues, beneath the skin, would give pain. She was very restless, and had not slept for several days. Pulse 120 per minute, and very distinct, with natural fullness. Heart-sounds not quite natural, but without irregularity. There was a peculiar double click to the first sound, while the second was natural. Tongue coated; bowels rather constipated; urine less abundant than usual, with a trace of sugar.

I prescribed one-fourth of a grain of morphine every three hours, to be given at short intervals if necessary. Quinia grs. iii; tr. ferri chlo., gtt. xv. every four hours; also fl. ex. digitalis, one minim every four hours. Feet and hands to be kept fomented with carbolic acid water, three grains of acid to the ounce of water. May 1st, I found my patient had rested pretty well, although when the morphine had been omitted, the pain returned. No other changes in the symptoms. Ordered a laxative and treatment continued. May 4th, bowels had moved properly, but the other symptoms were aggravated. Anodynes had not been continued. Pulse 130; heart-sounds about the same as at last visit, and the discoloration had extended. Prescribed tr. cinchonæ comp., and tr. gentian. in equal parts; a teaspoonful every four hours, in place of quinine. Fl. ext. digitalis, three drops every four hours. Continue iron and give morphine regularly to

relieve pain. As the case progressed, I found as I increased the digitalis, the heart-sounds improved as well as the other symptoms, until the pulse decreased in frequency to (or below) 80 beats per minute, when its action became irregular, and the symptoms were worse. When the pulse was allowed to rise above 110, the patient was in a less favorable condition. She invariably improved when the pulse was kept between 80 and 100 per minute. The patient was brought to Aurora, May 21st, and upon May 25th, the line of separation being complete, in presence of Drs. Robbins, Groat, Higgins, Howell and Elliott, I amputated the toes and heads of all the metatarsal bones of the right, and all the toes, except the fifth of the left foot. May 28th, I amputated all the fingers, except the index finger of the right hand, and, June 19th, I completed the amputations by removing the thumb and index finger of the right hand, leaving, however, stumps of all the fingers (but one), which may become quite useful. The amputations were performed under the influence of ether, by completing with the knife the line of demarcation formed by nature; pressing back the granulating flesh, and cutting off the bone, except where the separation occurred at a joint, in which case I disarticulated. In no case was any living tissue removed, and the stumps were allowed to heal by granulation. The parts removed were mummified, and hard as bone. One of the fingers I here present for your examination.

The dressings for a few days after amputation, consisted of carbolic acid lotion applied daily, and an ointment composed of one drachm of boracic acid to the ounce of cerate, spread on strips of old cotton or linen cloth. Following the first amputations, the nose and ears became discolored, swollen, and painful, having the appearance presented by the fingers and toes, in the early stage of the disease, previous to my being called, and I feared they also would become gangrenous. But as the effects of the ether passed off, and the pulse beats numbered less than 100, the natural color, and condition of the parts were restored. The same condition of the nose and ears followed each succeeding amputation.

The case has progressed favorably under the persistent use

of digitalis, and tonics, without the necessity of anodynes, to the present time, June 30th; the stumps being nearly all healed, and the patient gaining in appetite, flesh, strength, and spirits. Upon reviewing the case, I am led to the conclusion that the cause of the disease must be attributed to the central organ of circulation, the heart, as I could find no lesion to account for it; and the further fact, that when from any cause, either the omission or too free use of digitalis, or an increased action of the heart from the administration of ether, or the shock of amputation, the circulation was much disturbed, the pain, swelling, and tendency of the gangrene to spread, or new parts to become involved, was apparent. It will be observed that the parts affected were those most distant from the heart, and possessed of the weakest circulation: viz, the fingers, toes, ears and nose.

P. S.—Aug. 1, 1877. Since the above was reported, the patient has continued to improve, with no symptoms of a return of the disease. All the stumps have healed, and are well formed, and she walks, and feeds herself. The abnormal condition of the heart remains, though greatly improved. She still continues to take the preparations of digitalis, bark and gentian.

CASE OF TWISTED PEDICLE. OVARIOTOMY.

By R. Stansbury Sutton, A.M., M.D., Pittsburgh, Pa.

On the morning of August 14, 1877, I was requested by Mr. B. to see his wife. He said, "She is very large and has dropsy." Proceeding to the house with my aspirator, I found a lady, aged 31 years, lying in bed on her right side, and in great distress. Her respirations were short, purely pectoral and 40 to the minute. Her pulse was 136, tongue red and dry. She was pale, and the expression of her face anxious. Her legs were not œdematous. It was impossible for her to lie either upon the back or left side. Her abdomen was immense; above a line drawn obliquely from the middle of the left lumbar to the centre of the right hypochondriac region, she

was tympanitic; below this line dullness in percussion was general and fluctuation distinct. She was not tender to firm pressure made at all points. From the husband I learned that she had been very large for at least two years, and that he had married her one year before, not suspecting any special cause for her unusually full abdomen; that she had become pregnant, and that just ten days before, she had miscarried a six months fœtus weighing about two lbs. From the nurse, an intelligent woman of ample experience, I learned that, on the fourth day after this, she had complained of thirst and become feverish. No evidence of metritis or pelvic cellulitis was present, and I concluded that I had to deal with an ovarian cyst, the pedicle of which had become twisted, and that commencing gangrene of the cyst was setting up peritonitis. I gave this opinion to the husband with a grave prognosis; in the event of leaving her alone that death would follow in a very few hours; in the event of resorting to treatment that but little hope of saving her life could be entertained, but that such a course gave the only chance of hope. The young wife begged for the latter course, and the husband and father of the patient assented. To gain time, and to relieve the extreme urgency of the symptoms, I thrust into the cyst an aspirating needle, and drew off twelve pints of a dark chocolate-colored fluid, which I found rich in albumen, containing the compound granular cell, all of which confirmed my diagnosis of the character of the cyst. I ordered her stimulants and animal broth with citrate of lithia, and left the house. Returning to my office I gathered my instruments together, and taking with me Drs. McCann and Lemoyne, I returned to my patient at 4 P. M. We found her respiration improved, 24 to the minute, her pulse 132. Her measurements were as follows: Around the abdomen at umbilicus, 46 inches; two inches below, 46 inches; from umbilicus to right supra-spinous process of ilium, 12½ inches; from the same to the left, 12½ inches; from ensiform cartilage to umbilicus, 9½ inches; from umbilicus to pubis, 10½ inches. My friends both examined her carefully, and coincided with me in the diagnosis, and in the opinion given as to treatment. Her husband had gone to the city on

some urgent business, and would not return until too late to operate by daylight. Not feeling satisfied with his absence, and being certain that she was getting into better condition as to respiration and circulation, we agreed to postpone operating until 8 A. M. of the next morning.

In addition to what she was taking, we gave her small doses of morphia during the night.

Aug. 15, 8 A. M. Present, Drs. McCann and Lemoyne. Pulse 132. Temperature 100½. Has slept about three hours during the night, and says she feels better than she did yesterday. Assisted by Drs. McC. and L., I performed ovariotomy, removing 27 pints of fluid and a cyst with a large solid portion, globular in form, weighing three and a half lbs.; making with the fluid drawn yesterday 39 pints (weighing 39 lbs.) all added to the weight of the cyst and solid contents, 42½ lbs.

The adhesions were all recent, and omental general peritonitis was present, the omentum being very red, and at least four inches square of its surface peeled off from the cyst as it was drawn out. On the right side, several patches of peritoneum were congested and red. The abdominal wound was about five inches in length, and was made with carbolized instruments; no ligatures were required, and during the entire operation not over an ounce of blood was lost to the patient. The pedicle was twisted one-half revolution only. It was broad, of medium length, and was to the left of the uterus. It was tied with carbolized silk, the knots cut short, and the cyst was cut away an inch above, and just below the solid growth alluded to, in the bottom of the cyst. The abdomen was carefully cleaned out with warm carbolized water, and carefully prepared sponges of the finest texture. The wound was closed with silver wire sutures, including the peritoneum. A few straps of adhesive plaster, some layers of carbolized lint, a thin layer of cotton wool and a broad bandage completed the dressing. Some brandy was now given, and the patient put to bed with a jug of hot water to her feet, and a blanket over her. She slept for two hours. At 1:30 P. M. her pulse was 132. Temperature 99⅘. Has had no nausea, and taken a few spoonsful of milk and lime water and some brandy. At 3 P. M.

took some citrate of lithia in solution, also a little milk. At 4 P. M. took some brandy, and passed water voluntarily. At 5 P. M. pulse 144. Temperature 99⅞. An injection, consisting of five grains of quinine, ten drops of tincture of opium, and two ounces of milk, to be thrown into the rectum every four hours. A tablespoonful of iced milk to be given by the mouth as often as the patient desires liquid. A tablespoonful of brandy to be given by the mouth every four hours. No pain is complained of, but the patient expresses herself as comfortable.

8 A. M. Aug. 16. Twenty-four hours since we met to operate yesterday morning. The nurse reports that the patient was very quiet all night, and frequently passed gas from the bowel. She is yet very tympanitic, pulse 140, temperature 101¾. Has taken during the night considerable milk. Requests beef tea this morning. To the rectal injections I ordered added a tablespoonful of whisky every two hours. The gas to be drawn from the rectum with a large male catheter each time before the injection is given. By the mouth, to take a tablespoonful of whisky and two ounces of beef broth every two hours.

4 P. M. Dr. Lemoyne present by my invitation. Pulse 135, temperature 101¼. Expression of countenance better than in the morning; tongue dry. Has no pain. No pouching of Douglas' cul-de-sac. Kidneys acting well, urine clear. No catheter required. Treatment continued.

10 P. M. Pulse 136, temperature 100¾. Aug. 17, 9 A. M. Pulse 160, respiration rapid, temperature 95. 10:12 A. M. Died without a struggle.

The nurse reports that she slept from 10 P. M. until a few minutes of 1 o'clock A. M. After waking, took some beef broth and brandy, but was restless until 3 A. M., when she observed her sinking rapidly. Thirty minutes before she died she took with her own hand and drank a glass of whisky and water. Death occurred from shock. No autopsy was granted.

The following fact in the microscopical character of the fluid is important. It contained, in addition to the elements men-

tioned, a very large proportion of blood corpuscles. Hemorrhage into the cyst had been considerable. The arteries of the rotated pedicle still let in the blood, which the veins were incapable of returning.

The appearance of the cyst, when viewed through the abdominal incision, was as follows: Its color was changed to a dark red hue, showing active inflammation over a large surface; to this the omentum was attached by recent adhesions; along the border of this inflamed surface gangrenous lines were well defined. After removal, an examination of the cyst proved that it was rapidly becoming gangrenous throughout. The large solid mass in the bottom of the cyst was laid open, at its equator, with a knife, and was found to be full of cavities, from the size of a filbert to the size of a walnut; all of these cavities were filled with pus. The weight of the cyst and solid lump was 3½ lbs. The weight of the fluid 39 lbs, making 42½ lbs.

It is my opinion that had the condition been recognized three or four days earlier, the operation would have been more likely to have saved her. Or had ovariotomy been performed during pregnancy, still a better prospect would have been afforded her.

Clinical Reports.

ST. LUKE'S HOSPITAL.

Service of JNO. E. OWENS, M. D.,

[Prof. Surgery, Woman's Med. College; Lecturer on Surg., Rush Med. College, etc.]

Lacerated Wound of Fore-arm; Tetanus; Treatment by Calabar Bean; Sketching of Brachial Plexus; Death.

Reports of cases of traumatic tetanus, *successfully* treated by one method or another, are so numerous in current medical literature, that to judge from such reports alone, one must conclude that the treatment of the disease in question is tolerably satisfactory. I therefore publish this unsuccessful case, since it is only by a study of the successful and unsuccessful that a proper estimate can be placed upon this or that mode of management.

Aug. 29, 1877, a little boy, aged six and a half years, was injured by a passing freight train. I saw the case a short time after the injury, with Dr. G. M. Chamberlin, who was already in attendance. The integument, with little or no loss of substance, had been torn from the front of the right forearm. The laceration extended to the palm of the hand, and involved, to some extent, the base of the thumb. The temporary dressings were saturated with blood, the arm and hand being warm. We placed in apposition the margins of the lacerated integuments, except for two or three inches at the wrist, and introduced the requisite number of sutures.

The following day, Aug. 30, the patient was admitted to the hospital. The arm was dressed with a warm solution of carbolic acid. On the third day, however, the skin showed signs of mortification, which extended, until all of the lacerated skin and that of the fingers and the back of the hand became involved. The integument of the fingers and dorsum of the hand furnished no evidence of injury when first seen.

The patient had several attacks of "night terrors" in the hospital; but his father reported that he was subject to these previous to the injury.

The fifth day, the resident began to remove the dead integument, small portions still remaining on the palm of the hand and on the back of the wrist on the tenth day. The case, however, in other respects progressed very favorably. The patient ate and slept well, except the occasional disturbance above referred to, until the morning of Sept. 8th, when Dr. Brown, the resident, reported that the patient cried out at certain intervals from pain in the arm, induced by spasm. Upon attempting to place the thermometer under the tongue, it was found that the jaws were so rigid that the instrument could not be safely used. Jaws could be opened a quarter of an inch.

TEMPERATURE AND PULSE RECORD.

	Temperature.		Pulse.	
	A. M.	P. M.	A. M.	P. M.
Aug. 31,	-	103°	-	- 136

	Temperature.				Pulse.			
		A. M.		P. M.		A. M.		P. M.
Sept.	1,	100¼	-	101⅜	-	112	-	128
"	2,	100⅛	-	100⅝	-	118	-	120
"	3,	100	-	100⅛	-	118	-	130
"	4,	99⅛	-	101	-	122	-	140
"	5,	100⅓	-	101⅓	-	118	-	130
"	6,	100⅓	-	101	-	124	-	136
"	7,	100⅝	-	101⅓	-	122	-	136
"	8,		-		-	118	-	

The resident had prescribed the following:

℞ Potas. bromid. - - - ʒ v.
Morphiæ sulph. - - - gr. ¼.
Aquæ - - - - - ʒ ii. M.

S. Teaspoonful every 2 hrs.

Upon reaching the hospital, I found the patient asleep. In the afternoon the jaws had relaxed somewhat. The arm was enveloped in warm poultices.

Sept. 9.—Patient could open mouth three-quarters of an inch, and was free from pain, except when the arm was disturbed by spasm of its muscles. Treatment continued. At noon it was reported that the patient had slept the greater part of the morning, but the spasms of the arm had become more frequent, the interval ranging, for a time, from three to five minutes. The muscles of the neck were rigid and the head bent back. The patient complained of his throat, and refused to swallow his medicine.

At 2:30 P. M. there supervened a violent spasm of the muscles of the jaws, neck and trunk, opisthotonos being so great that the vertex was buried in the pillow. In a half hour the jaws could be separated three quarters of an inch, the patient was perspiring profusely, and the face flushed. The opisthotonos and rigidity of the affected muscles remained. Three seizures occurred within ten minutes.

3:45 P. M. Ordered subcutaneous injection of morphia, ⅓ gr.

At 3:57 P. M., whilst sleeping, he had another opisthotonic seizure, of momentary duration, which awoke him. He gave a cry of distress and dropped off to sleep again.

6 P. M. Opisthotonos pronounced, paroxysms frequent and severe; rigidity constant.

6:45 P. M. Morphia and bromide of potash discontinued; Squibb's alcoholic extract of Calabar bean, gr. $\frac{1}{11}$ substituted.

7 P. M. Calabar bean, gr. $\frac{1}{11}$.

7:15 P.M. " " "

7:30 P.M. " " " by hypodermic injection.

The frequency of the paroxysms became notably diminished, recurring at intervals, varying from five to fifteen. This improvement was temporary, for in an hour the intervals ranged from three to five minutes.

8:45 P.M. Calabar bean, gr. $\frac{1}{11}$, by hypodermic injection.

10:30 P.M. " " " " "

Sept. 10th.—12:30 A.M. Calabar bean, gr. $\frac{1}{11}$; pulse 120; respirations 26; result of medication since 8:45 P. M., Sept. 9th, negative.

1:15 A.M., Calabar bean, gr. $\frac{1}{11}$.

1:30 A.M. " "

2:00 A.M. " "

2:15 A.M. " "

2:30 A.M. " "

3:15 A.M. " "

3:30 A.M. " "

4:00 A.M. " "

4:15 A.M. " "

4:45 A.M. " "

A new solution of Calabar bean, prepared at 5 A.M., each drachm of which contained gr. $\frac{1}{7}$.

5:00 A.M., Calabar bean, gr. $\frac{1}{7}$th.

5:45 A.M., " " "

6:30 A.M., " " gr. $\frac{2}{7}$th.

7:05 A.M., " " gr. $\frac{1}{11}$th, hypodermic injection.

8:15 A.M., " " " $\frac{2}{7}$th

9:20 A.M., " " " paroxysms very short and less severe.

9:45 A.M., " " gr. $\frac{1}{7}$th.

11:15 A.M., " " " $\frac{2}{7}$th.

12:15 P.M., " " " $\frac{2}{7}$th; paroxysms recurred at in-

tervals, varying from three to five minutes, but they were very light, amounting only to a momentary contraction of the muscles.

1:30 P.M. Calabar bean, gr. $\frac{2}{7}$th; pulse 144; respirations 28, and superficial.

2:30 P.M. Calabar bean, gr. $\frac{4}{7}$th. As it was apparent that the case was rapidly approaching a fatal termination, under medical treatment, at 4:30 P.M., assisted by Drs. S. J. Jones, Chamberlin and Richy, I cut down upon and stretched the brachial plexus.

An incision, two inches in length, and terminating below at the clavicle, was made, parallel to the anterior margin of the trapezius muscle, in the space between the latter and the external jugular vein. By deeper incisions through the superficial fascia, the platysma, and some cellular tissue and fat, the plexus was exposed in the triangle formed by the posterior belly of the omohyoid, the trapezius and the levator anguli scapulæ muscles. The sheath, to all appearances normal, was slit up as far as the intervertebral foramina. The plexus having then been lifted from the sheath by means of an aneurism needle, the flexed index finger was substituted for the needle and traction exerted upon both the central and peripheral portions. The wound was then washed with carbolic lotion, and closed by interrupted suture, except at its most dependent part, in which a small tent was placed. For a half hour after the operation, the patient's condition seemed to have improved. The convulsive seizures ceased, the opisthotonos subsided, the patient resting the back of the head instead of the vertex on the pillow, but a certain degree of rigidity of the cervical and other muscles remained. The patient was able to separate the jaws three quarters of inch. This apparent improvement, due, in my opinion, to ether, soon passed away, after which the convulsive attacks were more violent than they had ever been.

7:30 P.M. Aqueous ext. Calabar bean, $\frac{2}{5}$ gr. (hypodermic).

7:45 P.M. Calabar bean, (hypodermic) gr. $\frac{1}{3}$.

8 P.M. The paroxysms were so severe, that I asked the resident to give the patient a few inhalations of chloroform.

Already somewhat under the influence of Calabar bean, the patient ceased to breathe after he had inhaled a very small quantity of chloroform. By drawing the tongue forward and continuing artificial respiration for a few minutes, respiration became re-established.

8:15 P.M. Another spasm; Calabar bean, ½ gr. (hypodermic).

9:00 P.M. Calabar bean, gr. ½ (hypodermic).

9:30 P.M. " " " "

10:00 P.M. " " " (hypodermic); great thirst, but the patient instantly regurgitates any fluid that he attempts to swallow.

10:30 P.M. No abatement of the spasms; increased thirst.

11 P.M. Calabar bean, gr. ½; patient insensible to the introduction of the needle of the hypodermic syringe.

11:30 P.M. Calabar bean, gr. ½; pulse 170.

12:00, midnight. Calabar bean, gr. ½; patient still conscious.

Sept. 11th—12:45 A.M. Calabar bean, gr. ½; paroxysms less severe.

1:30 A.M. Calabar bean, gr. ½; hurried respirations.

2:15 A.M. Calabar bean, gr. ½.

3:00 A.M. Asleep; pulse 180.

4:00 A.M. Great suffering; inhaled ether more or less till 5 A.M.

6:00 A.M. Extreme thirst; inability to swallow; pulse 180; respiration 48.

7:00 A.M. Pulse 180; respiration 48; lips cyanosed; pupils strongly contracted.

7:45 A.M. Died.

TEMPERATURE AFTER DEATH.

7:55 A.M.,	105°	9:00 A.M.,	99⅘°
8:15 A.M.,	104⅔	9:30 A.M.,	97⅘
8:30 A.M.,	102		

NOTES FROM PRIVATE PRACTICE.

Sulphate of Cinchonidia as an Anti-periodic.

Any information which will tend to lessen a physician's expenditure for drugs, will, I take it, be thankfully received, especially in times such as these. I have recently noticed two or three articles with reference to substituting sulphate of cinchonidia for sulphate of quinia, the writers claiming that the cheaper drug fulfilled every indication met by quinine. I know that many physicians are not aware of this fact, and wish to add my testimony to that already given. I find that in malarial fevers of whatever type, the cinchonidia salt has proved just as certainly a specific, as the salt of quinia. Having had a large number of cases of this class, treated almost entirely with the drug in question, I have learned to place just as much confidence in it as I have had in quinine, and with equal confidence predict a favorable result. It has not failed in a single instance to prevent the next paroxysm in a tertian and the next but one, sometimes the next in a quotidian ague, and is equally efficacious in remittent fever, being well borne by the stomach, and not producing any of the unpleasant head symptoms which so certainly follow large doses of quinine. I administer it in five grain doses, either in pill or powder as the patient desires, every four hours, day and night, without any reference to paroxysm, intermission, remission or exacerbation, until the patient has passed safely through the "chill day," in a tertian ague, and through two days without chills in quotidian; then continue in smaller doses, say two grains after or before each meal. Considering the fact that quinine is sold at nearly four dollars per ounce and sulphate of cinchonidia at only eighty cents, every physician should be acquainted with the above facts. It will be seen that it only requires about a drachm (or ten cents worth) of the drug to completely control the disease.

WARREN Co., Illinois. H. L. HARRINGTON.

Ingrowing Toe-nail.

Among the various methods for treating ingrowing toe-nail, excepting when the toe is greatly inflamed, so as to necessitate removal of a portion of the nail, none has proved so satisfactory to me as the following:

The nail should be allowed to grow long—from three-sixteenths to one-fourth of an inch—on the affected side of the toe. The side of the nail should *not* be pared, but the hardened integuments should be removed from beneath its edge after soaking the toe in warm water. This being accomplished, a narrow strip of adhesive plaster should be slipped under the corner of the nail—adhesive side downward—and drawn firmly over the flesh which has been pressed up beside the edge of the nail, and fastened by both ends beneath the toe. This simple dressing can be renewed as often as necessary by the patient. As the length of the nail carries the corner beyond the toe, it cannot irritate the flesh and the pressure of the shoe upon the end of the nail tends to elevate its sides.

The plaster elevates the ingrowing portion of the nail and protects the tissue which had been irritated by it.

If, in addition to this treatment, the patient will discard tight shoes, he will be rewarded by a speedy and permanent cure.

Paring the side of the nail gives temporary relief, but insures the return of the trouble by leaving an irregular edge, and a sharp corner at the matrix, which must irritate as the nail grows.

Scraping the middle of the nail, and placing a little roll of cotton beneath its edge, if properly done, will sometimes give relief; but it seldom effects a cure.

Removal of a portion of the nail is painful and generally unnecessary. I have seen cases of long duration, in some of which suppuration had existed several months, speedily cured by the method here recommended, after all ordinary methods —save ablation—had been faithfully but unsuccessfully employed.

188 Clark St., Chicago. E. F. Ingals.

Medicinal Condiments.

The sodium-chloride which is found in all the tissues and fluids of the body, is so essential to osmosis and therefore to life, that it is taken into the body, in part at least, in the form of a pure chemical. What table is without its *salière?* The broil, the roast and the fry, the soup, the stew and the salad, are worse than useless without the addition of salt. A few years ago it was evident that my blood was not manufacturing normal hæmatin, and with a physician's dislike for medicine I became a subject of spanæmia. Confident there was something wrong with my assimilative powers, I sought for a remedy. The tincture of iron and the "elegant" elixir did not suit my taste, and therefore I put into my salt-cellar an equal quantity of sodium-chloride and Quevenne's iron. This compound, alimentary and tonic, was sprinkled upon my beefsteak and into my soup, and in brief time the improvement in my condition was pronounced. Not only sodium-chloride with iron, but other of the proximate principles—potash, magnesia, soda, lime, chlorides, phosphates, carbonates, etc.,—might be similarly employed. These, in varying quantities, combined with pharmaceutical exactness, and the proportion determined by the physician's knowledge of the particular constituents lacking in the disease or condition in question, might find their place, not in the vial, but in the *salt-cellar* to be used like pepper and salt with the food. Sometimes the fluids, sometimes the solids of the body suffer; now the bones, then the muscles, and the nervous tissues. These various indications may be at least approximately met by combinations of certain of the elementary substances of which the body is composed, administered in the form of *a condiment.*[1] Such a condiment may be prepared by thorough trituration to meet the conditions of a weakened digestion, for trituration adds much to the assimilability of a medicament. Such medicines (*food*) are most easily digested when the stomach, excited to secretion by the anticipation or presence of food, is ready to receive and dispose of them. It will be ob-

1 I do not claim that this is better than other modes, but that it meets certain individual caprices and idiosyncrasies.

served that I have conformed to common usage in the use of the word "medicine." Strictly speaking, iron and common salt are not medicines. They are related to physiology, not to pathology.

JAMES I. TUCKER, M. D.

Reviews and Book Notices.

TRANSACTIONS OF THE TWENTY-SEVENTH ANNIVERSARY MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, Held in the City of Chicago, May 15, 16, and 17, 1877. Chicago: *A. S. Kissell & Co.*

At the last meeting of The Association of American Medical Editors, Dr. H. C. Wood, in his presidential address, threw out the suggestion that medical societies should abandon the publication of their transactions in volumes. "In these books," he said, "a few kernels of wheat are so buried under an enormous heap of chaff, that they are often entirely lost to the profession. The societies should select some medical periodical, and publish in it the essential part of the proceedings and the meritorious papers. Thus incorporated in a medical journal, the transactions would reach a larger circle of readers, and present in a concise form more wheat and less chaff."

He who has read the last transactions of the Ill. State Med. Society, will heartily wish that Dr. Wood's proposition had been adopted by it; for he finds that he has waded through 250 pages, when a pamphlet, one-fourth smaller, could contain all that is worth printing.

The bulk of the transactions is made up of the reports of the standing committees. The by-laws charge these committees with the duty of preparing an annual report on the important improvements and discoveries in their respective departments. These reports should be brief and concise, in order to be intelligible and interesting; but, in the first place, they should be written by men who command the literary means to collect the necessary material, and possess the time

and mental capacity requisite to reduce it to proper form in writing.

If, in the selection of the committees, these conditions are lost sight of, the result is most disastrous. The report is either an *abortion*, such as the present *Report on Practical Medicine*, or a *monster*, such as the *Report on Drugs and Medicines.*

The latter is the most insignificant of all the results which are supposed to be aimed at in a committee report. It comprises sixteen pages in all, and nine of these are filled with phraseology, the profound wisdom of which will best be displayed by a few quotations. On page 105 the reporter startles the reader with the announcement that "the discovery of oxygen by Priestly, in 1772, was a grand era in chemistry;" and on page 106, he continues with this metaphorical effusion: "This element (the oxygen) is the key in the arch of nature's combinations, and its discovery led to the analysis of many mysterious conditions, as it seemed the combining link, the lever which opened the seal of secrecy, the cypher by which many things unexplained could be wrought out and made plain. It was the opening wedge to future investigation, as the key of explanation had been found." What a nondescript we have presented to us in that which is at once a *link*, a *wedge*, a *lever* and a *key!*

This compound of nonsense and bombast is followed by three pages of abstracts from the *Journal of Davis and Leonard, an advertising sheet, published for the benefit of Parke, Davis & Co., of Detroit!* To appropriately crown his wonderful work, the writer concludes with a terrible tirade against the introduction into pharmacy of the metrical weights. He objects on account of the —— orthography! Certainly *he* does not seem to be on very good terms with it. One might even conclude that the doctor confesses that tailors and grocers know more about it than he himself; for on page 118 he says, "This metric system will be appropriate for tailors and machinists, where length and breadth are to be estimated; or for lawyers in charging for briefs (*sic!*) it would be excellent for *grocers*, *green*-grocers, to weigh by, but not for druggists or physicians, where life is the issue!"

To use the doctor's own language (p. 117), "it is impossible to register all this rubbish;" but the signature he writes under one prescription is too good to be lost to posterity. Perhaps it is "the *link*, the *wedge*, the *key*, the *lever*" to elevate us to the mystical heights of the writer's ideas on the metrical system. It reads thus (page 117): "M. Sigda 1 metri spoonful. 50 deci-hora."

And such doubled-distilled absurdities are permitted to be read, yea to be published, as a report of a standing committee of a State Medical Society!

It is a great relief, indeed to find in the *Report on Surgery*, common sense, plain, unvarnished language and intelligible criticism. The paper, however, though good, is not a committee report. The author could, just as well, have presented it as a volunteer essay. It records a number of interesting cases, each of which involves a question of highly practical importance. A successful reduction of a femur which had been dislocated eleven weeks, gives the doctor an occasion to encourage the attempt at reduction in old dislocations. "I am of the opinion, it is our duty to undertake the reduction of dislocations generally, after a longer period has elapsed than what is laid down by authors as justifiable. With the exercise of ordinary judgment and common sense, no harm can follow from the attempt, and much good may result."

In dressing an injured elbow joint, when impairment of motion is liable to result, the reporter advises not to adhere to any fixed rule as to the position of the limb; but to bandage the arm in that position (either flexed or straight) in which it will, if anchylosed, be of the best use considering the patient's avocation.

Esmarch's bandage, the reporter thinks, has been generally adopted, perhaps "without duly considering the possible hazards attending upon it." He fears that death of the tissues must be the result of even a short interruption of the circulation; and in corroboration of his view, he reports a case of "gangrene and death resulting from the use of Esmarch's bandage." The patient, a young man, had a true anchylosis of

the knee joint with the leg flexed well back on the thigh. "The patient was put under the influence of chloroform, and I applied Esmarch's bandage, and, in order to the better secure the femoral artery, I carried the bandage up to Scarpa's triangle, and applied the rubber cord at the proper place for compressing the femoral artery with a tourniquet." A V-shaped piece of bone was removed, of sufficient size to allow the straightening of the leg. The bones were wired on each side; the flesh-wound, except at the angles, closed by silver sutures, and the limb laid on a Liston splint. On the third day after this operation the record reads: "Still doing well, pulse 89. Up to this time patient had not complained of pain, had no fever, and everything so far as I could discover, indicated a speedy recovery." Next morning the patient became delirious; his foot was found cold and black; and the leg, to within four inches of the wound, was discolored and blistered. Amputation above the knee revealed the fact that "all the adipose tissue, from the skin to the muscle, was gangrenous, and a greenish fluid was escaping from its surface." A re-amputation of the thigh at the upper third, gave a healthy stump; but three days later the patient was dead. The reporter's theory of the cause of death is this: Esmarch's bandage caused a paralysis of the limb, and disturbed the nutrition of the tissues so thoroughly that gangrene ensued.

We fail to note the force of this logic, and are rather inclined to see in this case the result of an undetected phlegmonous inflammation with ultimate septicæmia. If the use of Esmarch's bandage had made such profound impression on the innervation and nutrition of the limb as to result in gangrene, then we are at a loss to account for the apparent well-doing of the limb during the first three days; nor can we understand how "*the wound had all healed by first intention*" (as the examination of the amputated limb showed), while mortification was going on in the same tissues. To draw any positive conclusions from a case reported in such a manner as this, seems hardly warrantable in view of the fact that Esmarch himself, as well as others, fully appreciating the danger of suspended circulation have, by a series of careful experiments,

determined the length of time during which the limb may be deprived of its nutritive fluid with impunity.

The *report on Idiocy* has one great merit—it is very brief.

The *report on Electro-Therapeutics* can be commended to the chairmen of other committees, as a sample of what a summary report should be. It is clear, complete, and interesting.

The *report on Diseases of Children* has, by some mysterious transformation, been changed to a statistical report of the last scarlatina epidemic in Chicago. We are informed that this epidemic was not so terrible as one would naturally have supposed, after all the hue and cry that it created in this community, about one year ago.

The *report on Otology* consists of remarks on aural inflammations, and contains nothing but what can be found in a better and more complete form, in the standard works on Diseases of the Ear.

When the reports of committees are to be allowed to degenerate in so pitiful a manner as that exhibited in the several reports of the volume before us—it is time for a society to think of remodeling the working plan of its meetings. And the committee which was appointed for that purpose by the last convention, should earnestly weigh the question whether the Illinois State Medical Society would not fare better by abolishing the committee reports and depending solely on volunteer papers for scientific pabulum. We do not admire the system of constrained labor anywhere, and we further believe that when applied to literary efforts, it becomes a nuisance. Put a physician who has never had any ambition for writing essays, at the head of a standing committee, and he feels himself constrained to show "his appreciation of the honor conferred upon him;" he will go into labor and deliver himself of a few pages of grammatical blunders and general absurdities, dished up under the guise of a committee report.

Let those men come to the front who really have something to say; who desire to communicate some new observations, and to impart the result of original researches to their colleagues.

The transactions contain several very creditable essays of this kind; e. g., the paper on "An Improved Method of Performing the Radical Operation in Empyema," by E. F. Ingals, (published in the June number of the JOURNAL AND EXAMINER); the observations on "Apocynum Cannabinum," by Dr. Ransom; a very interesting review of the latest researches on the "Trophic Action of the Nervous System," by Dr. J. S. Jewell; the observations on phimosis as the cause of grave neuroses in children, by J. P. Matthews; the description of a simple apparatus for the treatment by extension of chronic inflammation of the ankle joint, by Dr. E. Andrews. These are contributions in the right direction. They exhibit original ideas, present novel features, and open a field for scientific discussion.

Printed in the same volume with such essays, how insignificant and needless do some other volunteer papers appear. We are really tempted to ask who is to be benefited by such papers as that on "Inflammation of the Middle Ear," which does not nearly compare with the corresponding chapter in Roosa's text-book; or that on "Canthotomy and Some of its Advantages," a paper which contains nothing new. The paper on "Iritis and Some of its Dangers," also disappointed us. We expected to learn here of some hitherto unobserved dangers, but found the whole substance of the paper dwindle down to the observation that an iritis, if neglected or improperly treated, is apt to impair or destroy the sight by occlusion of the pupil. Why must this be told to the members of a medical society in 1877, when it has been an undisputed fact ever since a knowledge was gained of the diseases of the eye?

A prominent feature of the transactions of the Ill. State Med. Society has always been the abundance of typographical errors. And the committee on publication has done its best to preserve in the present volume, the characteristic feature of its predecessors. Besides scores of minor errors (such as *diptheria*, *fœted*, *sulphites* and *children*) we notice a number of others which reflect severely either on the care or on the orthography of the proof-readers. From a large collection we select the

following specimens: Page 17, *empyemia* and *empyæmia*; on the same page *Richards* for Richey; p. 58, *Accasia;* p. 60, ferri *murius;* p. 76, *femural*, and *Sharpie's* triangle for Scarpa's; p. 82, *intusseption;* p. 107, *Eccrasceur;* p. 112, *habit* for habitat; p. 115, vis medicatrix *natura;* p. 128, ceteris *parabus.* The headings of pages 175, 177 and 179 bear the legend, "HYGIENICS OF CHILDREN ON PHIMOSIS"! to say nothing of the hieroglyphics intended to represent the formulæ for prescriptions. In every one of these prescriptions some drugs are named in English and others in Latin terms, with a bold defiance of grammar that is truly sublime.[1]

The carelessness in proof-reading is only surpassed by the want of good judgment displayed by the committee on publication, in printing papers which should never have been given to the medical public, or at least not in their present form.

Of course all the papers which were read before the convention, and many which were *not* read, were referred to this committee, whose special duty it is to put all such material in proper shape for publication, after excluding that which is manifestly worthless.

But what shall we think of a committee which publishes fourteen pages of private letters written in answer to the enquiries of the chairman of the committee on practical medicine; letters which show upon their face that they were not intended for reading in public, and which, fortunately for the convention, were not read. They were all referred to the publishing committee, with the request to publish as much of them as was thought proper or necessary. *Not an iota has been changed in these letters*, nor in any other paper presented, although the crude form of many of these compositions would have been greatly benefited by the editorial file.

We have penned this criticism prompted solely by a feeling of profound regret. The Illinois State Medical Society is composed of the great body of professional men in our own State. We have, so to speak, a personal interest in this home institution, and anxiously desire that its Transactions should be such as we can regard with pleasure, consult with profit, and issue to

1 E. g. Page 52, Aquæ Camp. ℥iv; p. 62, Mucilago Amyle ℥ii!

the world with pardonable pride. For this reason we have tried to show in the foregoing pages, how far below this standard the present volume of Transactions has fallen. It is better, far better, for us to learn of its fatal defects and deficiencies at home, than to be informed of them in the cruel phraseology of some strange critic, who may think the volume really worth dissecting. F. C. H.

LECTURES ON PRACTICAL SURGERY. By *H. H. Toland, M. D.*, Professor of the Principles and Practice of Surgery and Clinical Surgery, in the Medical Department of the University of California.

The Pacific coast is the home of the bonanza. As a work on surgery, of any kind, this book is a bonanza of curiosities in style, argument and statements.

The very essence of practicality is in being systematic and definite. This book possesses no system whatever, either in its treatment of general subjects or in specification. It is not definite or explicit in anything except dogmatical assertions and examples of the personal infallibility of the author.

It opens with a consideration of Anæsthetics and Inflammation. *Ether* is "good for old or very young people." Chloroform should be given "rapidly," in order to avoid its after effects upon the blood! We had supposed the general impression to be, that chloroform within limits was less harmful in proportion to the youth of the patient.

The pathology of inflammation, as given, is notably weak, loose and behind the times. Three stages of termination are laid down: "1st. Dilitescence! 2d. Resolution. 3d. Mortification! In the first the inflammation "absconds," like a thief at night, and the "parts become natural." In the second the parts become natural honestly, as it were,—we fail to appreciate the benefit or the importance of the distinction.

Following mortification, "no amputation should ever be performed until the line of demarkation has fully and deeply formed," so that "a division of the bones" only will be required. The first amputation we ever witnessed was for acute

spreading gangrene, and the patient's life was undoubtedly saved by the operation. It is certainly a well recognized and proper procedure in some cases of this nature. Hospital gangrene was never heard of on the Pacific coast.

The remarks on the general treatment of inflammation certainly impress one with the idea that the powers of nature and the grace of God have no business to interfere for the welfare of the patient; if he does not get well per prescription and treatment of the doctor, he does right to "return to his fathers." The treatment advised is emphatically and positively *antiphlogistic.* 1st. General blood letting "*to syncope*;" 2d. Leeches by the dozen; 3d. Blisters large and full; 4th. Calomel *sure*—are indispensable and wonder-working. (Oh! ye shades of departed Esculapians, how ye must rejoice!)

If these *remedies* (*?*) will not work, or you "be timid," the author furnishes some "especially good" prescriptions, called "depressants" and "deobstruents," (*sic*) and the reader is at the same time notified that they are especially "superior" for "pneumonia and pericarditis;" and *note well*, if the latter trouble "be not *properly* treated it may terminate in death!"

Still a few pages further on, the author again helps us out with another "invaluable" prescription, which will "fulfill the indications more perfectly than any other remedy," in chronic inflammation of "*any* of the abdominal organs"! This last combination—p. 59—looks very much as if it might be the formula from which the universally applicable "California Vinegar Bitters" is concocted. (Quien Sabe?) This, of course, is "Practical Surgery"! Again, on p. 67, the cure of dropsy and all serous effusions is made easy and certain by a never failing combination, beyond which it is useless to search, or words to that effect.

We believe these things to be entirely out of place in *any* surgery, and when found in a course of "Practical Lectures" to a class of students, they indicate either a want of confidence in the Professor of Practice, or an inane desire on the part of the lecturer to deliver himself of some "sure cures."

On page 74 is the astounding assertion that an "Abscess is

formed by the *absorption* of the surrounding parts for its accommodation!" We had always supposed that the "surrounding parts" were displaced merely by the accumulating fluid. If the latter were not the true state of affairs, abscesses would be deadly and dire afflictions, and not commonplace, as they usually are. Again, page 77, "Pus is a secretion," "prepared by the capillary vessels!" There *is* a fountain sure. Again, "Abscesses are frequently absorbed," even "syphilitic abscesses are absorbed" without "any especial contamination of the system"!

Chapter VI. is a useless conglomerate mixture of unsupportable assertions, terrible platitudes, and "rare exceptional cases," under the head of "Lymphization." It is wonderful how the author manages to avoid the subject in hand, and wanders, and wanders on a "still hunt" after new topics, not only in this chapter, but in every chapter. No subject is treated of continuously—nothing exhaustively. He is continually "breaking out" with something else, like the coming forth of new crops of boils—it is really painful.

Chapter VII. opens with a "rare" case of ordinary scrotal hematocele, illustrative of "hemorrhage from inflammation"! Following this we are treated to some of the most unique opinions upon absorption and ulceration that book ever contained. We believe them to be original.

The "same old story" is told in the classification and treatment of ulcers—"Cancer is an ulcer that never heals"! "Ramollissement" uses up one paragraph, which is a whole mint of information on that subject. But does it belong to surgery? On page 93 the author labors with induration, and delivers himself of another formula for enlargement of the spleen and intermittent fever, never known to fail! The remarks on "Transformation," (a new term) "Hypertrophy" and "Atrophy," all in this same chapter, are truly ponderous in their wealth of research and importance of application to the subject in hand, provided the reader allows his imagination to have full play.

Chapter VIII. treats of "Congenital Malformations." Among the first mentioned is "Enlargement of the Fon-

tanelles," for which the liver is blamed, and "three or four grain doses of calomel at night," recommended! The club-foot shoe shown in the plate is the old-fashioned leg brace shoe. A shoe without braces passing beyond the knee joint, and embracing the thigh, can never succeed in correcting the inward twist of the foot in this deformity.

The author's "Felt" apparatus is practically a "fixed dressing," akin to plaster of Paris.

Tumors evidently present a rough and tumultuous sea for the lecturer,—things don't ride easy at all—it can safely be called "Heterologous."

In chapter X. scrofula is duly noticed. The general directions are about up to the accepted beliefs, but the medicine advised consists of the "Vinegar Bitters" prescription, heretofore noticed—it "starts the liver!"

"Never open the larynx or trachea for diphtheria"! This sentence in the author's opinion finally disposes of the important subject of Tracheotomy in this disease—a subject demanding the most careful and painstaking consideration of the practitioner. The opinion is based upon four fatal cases, performed "to gratify the friends" of the patients. This dogmatical statement is alone sufficient to condemn the work; there are many others even worse. In the face of the pathology and treatment of diphtheria, as elucidated and developed by many noted and eminent men—knowing that hundreds of children and adults are now living to testify to the safety and necessity of this operation—we deem this wholesale, sweeping and unqualified assertion—reiterated and repeated as it is in these pages—both outrageous and pernicious. It is valuable only as a monument of the author's total want of information on this subject. No surgeon who waits for the "friends of the patient" to *ask* for the operation before realizing the necessity for it, will ever have any successful cases. The author has a prescription which "dissolves the *albumen*, of which the membrane is composed"!

The consideration of the hip joint, whether with reference to its diseases or dislocations, is lamentable, weak and worthless. Dr. Toland claims to be the introducer of *sub-periosteal*

operations, and yet considers "amputation (at the hip) preferable to re-section," the latter always leaving the limb a "useless, inert mass!"

Under fractures, we find this sentence, "The femur, notwithstanding its *great length*, is *occasionally* fractured"! The author has no use for, and cannot conceive of, any better apparatus for the treatment of fractures of this bone, than the double inclined plane.

Professor Brainard's method of treating ununited fractures is given in this language: Prof. B. "passed ivory pins between the ends of the bones and allowed them to remain," etc.! This *will* be news to Professor B.'s friends.

Tetanus has no terrors for Dr. Toland. He controls the spasms by giving "twenty drops of tr. cannabis indica every two hours," until the "symptoms entirely disappeared," together with morphia.

The author claims the performance of the "first operation for strabismus in America;" the discovery of the hæmostatic properties of Monsel's salt; and to be the first surgeon to perform "sub-periosteal operations." He has also discovered and named a new kind of hernia,—"peritoneal," he calls it. It is apt to affect the position of the linea alba. Chelius' Surgery, published some fifty years ago, contains an excellent description of this same trouble; and the latter surgeon warns the reader not to be led into the mistake that these little protrusions have anything to do with the trouble, if they are found in a patient suffering from colic. Dr. Toland cuts them off, without doing the patient any damage.

The author goes "out of his way" to prove that ophthalmology and otology have shown no advancement during the past "twenty years;" on the contrary, less is known about eye and ear troubles now than then. Such instructions as "bleed from the arm to syncope," "to repeat the bleeding," "apply leeches back of the ears," "shave the scalp and blister," are given as some of the methods of treating "acute inflammation of the eye." Von Graefe and others have done nothing to improve operations for cataract, etc. "Couching" is the best operation.

Under the head of diseases of the joints, a prescription is given for inflammatory rheumatism, which is "the best combination that has ever been suggested," "Dr. Flint, Jr." to the contrary notwithstanding.

The author claims to have performed ligation "for aneurism oftener than any other surgeon in the United States." Somewhere in the book, "the latter end of the last century," is ligated.

Dr. Toland leads many a "forlorn hope" against the opinions of "*other physicians*," whom he has met at the patient's bedside, during his chequered career, and always comes off victorious. This may be an evidence of "Toland's luck," as it is termed; still we cannot think any such reference either modest or properly placed, when found in any scientific work offered to the general profession.

The profession will gain nothing from this work, and like Rip Van Winkle of old, would have been "better off midout it." It is centuries behind the times.

The author, in his preface, calls the work a "Talk" on surgery—yes, an office talk.

We are fully convinced that no surgeon can ever *add* to his laurels by publishing an "*extemporaneous*" book. The last page contains a plate with description of two "rectum specula."

The publishers deserve every praise for the execution of their work. C. T. P.

OBSERVATIONS ON THE DISEASES OF THE RECTUM. By *T. B. Curling, F. R. S.*, Consulting Surgeon to the London Hospital. Fourth edition. *Lindsay & Blakiston.* 1876.

We are told in the preface to this new edition, that the former one has been completely revised and added to; so that the work is brought up to date in all matters of which it treats. It is certainly a very excellent work upon a very important subject. It comes from the hands of a surgeon of acknowledged ability and large experience in the department of which he writes; and any one who wants a clever and judicious instructor, and from whom he would seek assistance in

the care of cases of diseases of the rectum, cannot do better than to carefully study Mr. Curling's book, and follow its teachings. It is very pleasantly written and beautifully printed and bound; so that altogether the book is a credit to its author as also to the well known publishers.

R. G. B.

MEDICAL AND SURGICAL REPORTS OF THE BOSTON CITY HOSPITAL. Second series. Edited by *David W. Cheever, M. D.*, and *F. W. Draper, M. D.*, 1877.

This would more correctly be called a second volume, than a second series. Series means a row, and as the first series contained only one volume, though that was a large and valuable one; it was hardly enough to make a row. It is to be hoped that American hospitals will not follow the faulty plan of Guy's, in London, which has added a useless annoyance and perplexity in the matter of references, by repeatedly commencing a new series, and beginning again at number one with its volumes. There is no conceivable sense in such a procedure, especially in Guy's reports, where there is no material change in the shape and size of the volumes. The Boston City Hospital has changed its style from the green cloth binding of the former volume to a plain heavy paper cover with a cloth back, in imitation of Guy's Hospital Reports.

The contents of the volume are very valuable, consisting of cases, histories and tables of a highly instructive character. Some of the cases are illustrated by series of well executed lithographs, some of which are colored. This is, in many respects, the most creditable hospital report ever issued in America, and the staff of the Boston City Hospital have reason to be proud of its contents.

E. A.

TRANSACTIONS OF THE AMERICAN GYNECOLOGICAL SOCIETY.—Vol. I. For the year 1876. H. D. Houghton & Co., Boston: 1877.

The value of this book consists in the articles on various gynecological subjects that it contains. The names of the writers of these articles are a guaranty that this work is of ex-

traordinary value. Papers by Barker, Emmet, Skene, Batty, Duncan, Jenks, Parvin, Barnes (of London), Byford, Thomas, Campbell, Richardson, Chadwick, Noeggerrath, Wiltshire, Goodell, Tait, Bixby, Peaslee and Mundè form a collection of contributions seldom contained in one volume.

No detailed account of the papers submitted will be here attempted. They must be read by every physician bent on keeping pace with the development of this branch of the profession, and then he will receive instruction direct from men who have, in some instances, devoted themselves for years to the subject upon which they write.

J. H. E.

A Treatise on Hernia with a new process for its radical Cure and Original Contributions to Operative Surgery and New Surgical Instruments. *By Greenville Dowell, M. D. D. G. Brinton*, Phiadelphia, 1876.

Monographs on special subjects are common enough these days, and we suppose all of them are put forth to fill a place or supply a want in medical or surgical literature, which is noticeable to the writers thereof. If the above one is expected to fit into some vacant place, we don't know where to put it, except it be among the novelties, and lable it, not "why so," but "why made."

There may be many good and valuable suggestions in the book, but we have failed to find them. The personalities might have been omitted without detriment to the work; and in fact we think most, if not all, could have been left out without doing violence to the literature upon the subject of hernia. As to the "new operation, or the author's process" we cannot express an opinion. It seems to have been very efficient in his hands, who probably understands the workings of the process, but we have to confess to so great obtuseness of comprehension as to be unable to understand the various manipulations in the different steps of the operation, from the descriptions given, even with the aid of the very elaborate illustrative plates.

If we were to call attention to some of the very loose ways in

which the subjects are treated, we would cite that of irreducible and inflamed herniæ. The causation of the latter is given as accumulation in the sac of foreign substances, such as "worms, seeds, ingesta, kicks, falls," what about these two latter getting inside of a hernial sac? The treatment would suggest itself, if not, we would refer the curious to the book. In case of irreducible hernia, we are advised to use "mercurials and alteratives to reduce the tumor," how they are to do this, is not told. We are also advised to get "complete relaxation of the neck, (neck of what is not stated) by sedatives and anodynes, as opium, chloroform, belladonna, and veratrum," how used, is not said, but we are told to use ointment of belladonna, veratrum and iodide of mercury over the tumor, to produce absorption and relaxation. How any or all of this would be expected to put an irreducible hernia into a condition to render it reducible, we cannot understand. We had supposed that a hernia which could be replaced by other means than by surgical operation should not be styled irreducible. The patient is very sagely advised to "not let himself become constipated, or the hernia impacted by cherry, water-melon, or other seeds, as they are often the cause of strangulation." The author says he thinks this variety of hernia, (the irreducible,) must be very rare, for he has never seen a case. We think he might as well have dismissed the subject at that, as to have tried to enlighten the surgical world upon a subject, of which he evidently knew so little. What has been said will apply equally well to what our author says upon incarcerated, impacted, and strangulated hernia. The causation, symptomatology, pathology and treatment all through, are something fearful if not wonderful, and we could readily believe that he has seen but little more of any kind of hernia than he confesses to in the case of the irreducible variety.

The part of the book devoted to new instruments and original contributions in operative surgery is in keeping with the other.

We were at a loss at first to know whether or not the book was intended as an advertisement for instruments and appliances, for in style and general appearance it could hardly

enter the field as a rival, even of the illustrated catalogues of instrument makers and venders.

We could not commend the work to the profession, as containing information that cannot be found in better shape elsewhere, except it be to try to learn what the "author's process" is. We do not believe the work will establish the writer, with his truncated pyramid of titles, as an author, nor the publisher as a desirable book-maker.

R. G. B.

AN INDEX OF DISEASES AND THEIR TREATMENT.—By *Thomas Hawkes Tanner, M. D., F. L. S.* Second edition. Revised by Dr. W. H. Broadbent, F. R. C. P., London. Ps. 432, 8 vo. Lindsay & Blakiston, Phila., 1877.

This volume is intended to facilitate the work of the busy practitioner. It consists of an alphabetical arrangement of all diseases, with a short description of each and of its treatment. It contains articles upon every subject, from *abscess* to *zona*. In the sections on treatment, the author gives numerical references to prescriptions in full, contained in the latter part of his book. Over 400 of these complete prescriptions are given, as a sort of appendix to the main work. In the appendix are contained some formulæ for aliments, some remarks on electro-therapeutics, a description of climates for individuals, and of mineral waters together with their analyses.

The book will prove a very useful one to the practitioner who has not the time necessary to carefully study every case for which he prescribes. The physician who studies much will not use it to any extent; but the physician who *will not* study and yet wants to know what to give in such and such cases, will probably find the work invaluable.

J. H. E.

Editorial.

The issue of the present number of the CHICAGO MEDICAL JOURNAL AND EXAMINER concludes the volume for the current year. The editorial corps, reviewing the efforts put forth to realize the aims of the *Chicago Medical Press Association* and the results actually accomplished, might with reason point, not merely to the enlargement of the present volume which has been found practicable during the year, but to the greater value of its contributions to medical literature. This last result is unquestionably due far more to the character and labors of contributors, than to the personal efforts of the editors themselves. We are content, however, to leave the consideration of these questions to our friends and subscribers, with whom, after all, the vital decision as to the merits and demerits of this JOURNAL must eventually rest.

We have to express our thanks to the various medical gentlemen who have efficiently aided us during the year. To Drs. J. E. Owens, E. W. Sawyer, D. R. Brower, J. S. Knox and W. J. Maynard, we are under obligations for the full reports from the sections of the American Medical Association in its twenty-eighth annual convention, published in our July number. To Drs. W. F. Lewis, J. S. Knox, L. W. Case, D. A. K. Steele, E. Lackner and Chr. H. Fenger, we are greatly indebted for assistance in the preparation of our monthly digest of literature. And to all who have favored us with contributions during the year, we have also to extend our acknowledgments.

It becomes our duty at this time to bid a public and cordial farewell to two gentlemen, who have been associated in the editorial management of this JOURNAL since the issue of September, 1875, when its control was first assumed by the *Chicago Medical Press Association*—Drs. J. H. Etheridge and Norman Bridge. Their efficient and valuable services have

largely contributed to whatever of good has resulted from the fusion of the two separate medical periodicals formerly published in Chicago. They have done their part also in maintaining that cordial unanimity which has from the first distinguished the labors of the editorial corps, and which arouses a natural regret at this first change in its *personelle*. Their retirement is of their own choice, and necessitated by the pressure of other duties, Dr. Bridge having been entrusted with the charge of the library of the Association, and Prof. Etheridge having been appointed Secretary of the Faculty of the Medical School with which he is connected.

The editorial management will remain otherwise unchanged; and it is proper to remark here that this furnishes an illustration of one of the features of the organization which now controls the publication of this JOURNAL. The editors are elected by the Board of Directors of the Press Association, a corporate body, the constitution of which furnishes an ample guarantee as to the wisdom of their selection. While the editors, therefore, may be changed from time to time, the permanent character and value of the CHICAGO MEDICAL JOURNAL AND EXAMINER will not be thereby affected. No pains, nor expense will be spared in the future to still further increase its success and influence. It is in position to announce to the medical public, in the language, now rendered famous, of the French Marshal-President:

"*J'y suis et j'y resterai jusqu'au bout!*"

Correspondence.

PROPOSED PLAN FOR A MEDICAL REFORM.

To the Editor of the MEDICAL JOURNAL AND EXAMINER.

The plan which I would propose has for its object an association of physicians and surgeons, somewhat similar to the Royal Colleges of Physicians and Surgeons of London, Edinburgh, and Dublin—for the purpose of elevating the tone of the profession, stimulating earnest, careful study and original

investigations—for the purpose of benefiting pecuniarily and medico-socially its members—and for the purpose of enabling the profession, and more especially the laity, to discriminate between the charlatan, the drone and the mass of workers of the profession.

Under this plan there would be necessary the organization of a new medical society, which should require the candidate for membership to satisfactorily pass such examination as shall be prescribed on the fundamental principle and outlines of the several branches of medical science; and on such extra-professional topics in the collateral sciences and general information as may be determined upon.

I would also propose that there be established, as a further honor for those entitled to such distinction, a Fellowship in this society—a Fellowship difficult to obtain, to be regarded as an honor conferred, as a prize to strive for, and one to which (as the profession is now constituted) only the best men could aspire.

To accomplish this I would have the matter carefully thought over by the best men in the profession—then have a number of these sign a call, to be sent to each member of the regular profession in each city, and to such outside physicians as would be thought likely to attend, for a meeting to discuss and adopt a preliminary plan. The meeting to be called to order by some one who is a leader, who would in a few well-chosen words shadow forth the outlines of the scheme, and thus prepare the way for proceeding to a permanent *preliminary* organization. Then elect a Court of Examiners, and, through a *strong* committee, adopt a plan and scope of examination for the purpose of procuring a number of charter members, (say about 20) for the future medical society—the preliminary organization then to be considered as having accomplished its work. The *twenty* should now proceed to organize, elect officers, adopt a Constitution and By-laws, get an act of incorporation, and then zealously guard the interests of the profession.

After a period of *not less* than six months, let the members beget, as the charter members were begotten, about fifteen

charter-fellows, who should also be incorporated, and grant diplomas.

I would authorize the Fellows to append to their professional signatures as an additional title, the initials of the name of the society.

I would *in the strongest and most positive terms* prohibit the conferring of *membership* upon any one, except those regular practitioners of medicine who have, in the regular way, secured the approval of the Court of Examiners; and just as strenuously prohibit the conferring of Fellowship upon any one, except such members as have in the regular way secured the approval of the Court of Examiners for this advancement; and I would have this secured by legislative enactment in the charter.

With a view to the proper remuneration of the Court of Examiners for their services, and for the purpose of placing the organization upon a solid financial basis, (and this I believe to be one of the strongest cements for holding such bodies together and to the mark) I would make fifteen ($15.00) dollars the minimum fee for the membership, and twenty ($20.00) dollars the minimum fee for the Fellowship.

I would have all of the examination papers in the case of each candidate sealed and carefully preserved, only to be opened, if desirable, by a two-thirds vote of all the members of the society.

I would make the limits of the society commensurate with the boundaries of the State, with a view to its early recognition by the State legislature, as authorized to exercise a censorship over medical professional matters within the State.

I would set the standard high from the first, certainly high enough to secure a selection of *not more* than sixty per cent. of the first year's candidates, and that very few might find the requirements easily satisfied.

I may be over sanguine, but I believe that the times are ripe for a movement of this kind, and that in several of the States the workers are ready to wheel into line as soon as some State has taken the initiative; and I furthermore believe that to the pioneers in a much-needed work of this kind due honor

and credit will be gratefully accorded. I also believe that ere *ten* years would have passed, this membership and Fellowship would be rocognized and properly appreciated by the people, and be demanded by them as a qualification from aspirants for professional positions or for the brightest smiles of public favor.

M. W. Wood, *Asst. Surg. U. S. A.*

Fort McKinney, Wyoming Territory,
Oct. 17th, 1877.

To the Editor of the Journal and Examiner:—

An editorial in No. 363 of the *New York Medical Record*, entitled, "How to Maintain Discipline," has a few suggestive ideas, which might be extended to more specific conclusions with general advantage. As a stranger, recently located in Chicago, the writer of this communication is moved to the expression of some opinions upon the hackneyed and threadbare subject of the Code Medical.

And first, as to the usefulness of a code of ethics, "denied by a late President of the American Medical Association," as stated in the article above referred to.

But few medical men, it would seem, even among those who class the profession as a simple business pursuit, should be willing to blot out the restrictions pertaining to the conduct of the business, or to break down the regulations which shape and govern the intercourse of the merchants engaged in it. No reference need be made here, to those who place the practice of medicine upon a far higher plane, and seek to remove it beyond the atmosphere of commercial influences.

To both classes—or to all classes, if there be others revolving between the orbits of these extremes—a specific understanding as to what shall, and what shall not be considered *en règle*, would seem to be as necessary as the statutory enactment of moral and penal codes for the proper ordering of society, and the protection of the personal rights and safety of its members. Not only are governments built upon codes of law, but the principle underlying their necessity,

is extended down to every department of life, involving the idea of similar effort, whether of an associated nature or not. Hence, every corporation, public and private; every guild; every trades-union; every society, whether of a business, religious, benevolent, literary or scientific character, has its prescribed formulæ of enactments, staking out the boundary lines of correct deportment, and running the parallels of conventional rectitude.

The extent to which one might moralize upon this indisputable fact, seems without limit. The hard essence of it is, that men are constructed differently in their mental organizations, reflecting different sentiments according to the nature and balance of the mind which conceives them. Just as a ray of light, falling upon different objects, reflects the primary colors of the spectrum, so the best and highest inspirations of humanity are shaded into a play of moral colors, in direct relation with the mental attributes from which their views and actions are reflected. Whether the reasons for this are inherent, belonging to the structural or anatomical character, or whether they proceed from different varieties of the moral perceptions, may safely be left to the theologian, or remanded to the arena of the metaphysician.

We deal with the fact; and from this it would appear, that a code of written rules, prescribing so far as may be, the nature of the obligations, duties and relations of physicians, is as necessary to the corpus medical, as to the body politic. By such means, and such means only, can the intricate questions arising out of the gored ox, be satisfactorily settled.

This proposition, then, being conceded as an abstract or theoretical verity, and the code in general being established, perplexing problems necessarily arise in its practical operations and executive administering. It would seem impossible to make laws covering every shade of wrong-doing, from the guarded insinuation, to the flagrancy of the overt act. No legislative tribunal has ever attempted such a thing; and with all the written statutory enactments pertaining to the administration of justice, personal rights would often be invaded, and the guilty go unpunished, were it not for the broad and benign principles of the common law.

The most that we, as medical men, can do, therefore, is to prescribe *general* rules relating to the intercourse of physicians, and establishing conventional tests of acceptable deportment in the prosecution of a double-featured calling; in the one aspect, a lofty, dignified, unselfish and humane vocation; in the other, bound by the accompanying fee to the haunts of trade, and nailed, like a base coin, to the counter. And just here it is that the whole difficulties of the case appear. In the aspect of scholar and philanthropist, exemplary and magnanimous professional conduct follows by natural sequence; in the garb of business, the tricks of trade are as irrepressible as Banquo's ghost, which would not down. Fortunate is it for the general welfare, that there are practitioners, and many of them, who without leading an ideal life, are sufficiently great to subordinate the latter to the former; or perhaps, more accurately, to run the machinery of the business with a "governor" constituted of the higher and nobler elements of the calling.

Hence, in the present nature of the case, it would seem impossible to accomplish more than as above indicated. We have not the machinery of courts, with judge, prosecutor, advocate and jury, backed not only by written laws, but rendered infallible by principles of equity; and all past attempts at their constitution, in form or essence, have been failures of necessity. The code must stand as a moral obligation, and the details of every-day action under it, must be remitted to the casuistic sense of each individual member of the profession. Flagrant acts of empyricism may be taken cognizance of, and punished, of course; but the refined charlatanism of our day—that of which we most complain—scorns all vulgar methods, and delights in the art which accomplishes an end with the skill of the *prestidigitateur*, who in the pride of his achievements, assures us that now it's visible, and now it isn't.

It is no grateful task to assume the severe character of a censor, or to arrogate to one's self the attributes of an exemplar. But an old disease has broken out with renewed intensity, and fastened itself upon the modern profession of med-

icine; and it is neither the part of wisdom nor of manhood to disavow it, or shirk the encounter. Upon the contrary, it is no less a duty to ourselves, than to the general public, whose well-being in one sense, we are supposed to hold in keeping, not by a mere medical fiction, but in reality, that we meet the question squarely at all times, and determinedly apply ourselves to its best solution. By such means only can we hope in this, as in all other human problems, "Out of the nettle, danger, to pluck the flower, safety."

Here we tread upon perilous ground, and it is essential at the outstart, to define our positions clearly, that they may be in no danger of misinterpretation. What, then, is this disease of the modern body medical? It certainly does not consist in the circumstance of a certain number of men living in open violation of a code of ethics adopted by the American Medical Association. This would be but a narrow view of the case, the true cause of which stretches its roots far deeper than questions of mere medical polity, and grows from the subsoil upon which rest the very foundations of our modern medical temple. Perhaps there has never been a time when there were fewer examples of open or penal infraction of the ethics of the "regular" profession, (a distasteful expression, but apparently necessary as a generic term) than in our own day. As satellites of a central luminary, representing, as we believe, the sum of our present knowledge of medical truth, we revolve around the code of the National Association, within a very clean-cut orbit, and he who swerves but a degree beyond it, soon goes whirling into the regions of medical fallacy and pretension.

Our parallel ceases here, however, and there can be adduced no further similitude with the systems of worlds which travel through illimitable space upon celestial time-tables. Our orbit is a sort of Rubicon, beyond which we must not go, but *within* which many deem themselves privileged to take cross-cuts and royal roads; and in pursuing their erratic flight, to occult as many of their fellow twinklers as possible.

To treat our case upon principles of medical logic, it

would be appropriate to regard the symptoms of the disease as the premises of a syllogism, and deduce the cause as the inevitable conclusion. The former, then, in a few words, may be said to consist in subordinating the higher elements of the profession to its baser features as a trade or money-getting art. Your correspondent knows not how better to formulate it in a single, dogmatic sentence.

It would be an unpalatable, as well as ungracious task to cover by narration, the arts, tricks, devices and methods so energetically-resorted to by many physicians, of all grades and of every school and *ism*, whereby all possible soils are "worked" that they may bear a return to the industrious cultivator. From the doctor who runs the ward meetings, hoping to reap the political places, to him who gets invited out to society gatherings and displays his æsthetic cultivation by select readings from the poets, there exist all shades of art in the business; running through every color, embracing every *pose*, depicting every possible perspective, and representing the crudities of the 'prentice hand, as well as the finish of the master. "All roads lead to Rome," and through whatever devious and narrow channels these efforts run, they but represent the acts which

> "Crook the pregnant hinges of the knee,
> That thrift may follow fawning."

Now, were such practices confined to the legions of pretenders, sailing under the flag of an *ism*, honest men might treat them with the scorn they deserve; but it is better to out with the ugly truth and confess they are not. Let no man say that this is an overdrawn statement. The proof is too accessible for successful denial. Far be it from the purpose of the writer to be hypercritical or harsh in judgment, and above all, to fail in a proper tribute to those who love their profession for its inherent worth, and who regard its pecuniary emoluments as did John Hunter, when, upon rising from a protracted dissection, he was wont to throw down his scalpel and exclaim, "I shall have to go and earn that miserable guinea."

But within the minds of many, no doubt, who will read

these lines, there are not a few modest and worthy medical men beginning to ask themselves some pretty hard questions upon this subject, and among others, perhaps something like this: "Wherein lies the difference between *legitimate* advertising by means of such reported cases and lectures, startling operations, etc., as are *specially prepared* for the profane eye and ear, and sure to find their way, by allusion or quotation, to the secular journals, and the more open one of boasting in public of cures performed, and playing fantastic tricks before a credulous audience? Or, perhaps, the subtle distinction between appending recommendations to Lacto-Peptine, a preparation proposing to relieve the stomach of any agency in the digestive process; or mayhap, to a mineral water differing by inappreciable fractions of composition from some other water, either of which may be as important in a therapeutic, as was the urine of Sir John Falstaff in a diagnostic point of view, as appears from the following:

Falstaff. "Sirrah, you giant, what says the doctor to my water?"

Page. "He said, sir, the water itself was a good healthy water; but for the party that owned it, he might have more diseases than he knew for."

What is the difference, it may be asked, between such recommendations, and certificates to the astounding efficacy of a patent medicine!

Let us be just, as well as temperate in expression; but let us not be too punctilious, or too timid to call things by their proper names.

The experience of every medical man of this day affords him personal knowledge of the many oblique lines leading to professional reputation, and pecuniary success; and true must he be to the dignity and honor of his calling, if, as a witness to the wild steeple-chase of success, and when, as it would almost seem, madness rules the hour, he can preserve his equanimity and bide the time for worth and merit to come to the stand.

If this philippic be grounded in truth and justice, and the symptoms of our sickness have been faithfully portrayed, what are the causes, it must be asked, lying behind such a distemper?

They are many in detail, and as per consequence, although few in substance and essence. Among the more potent of these, is the over-production of doctors, and the promiscuous adoption of a profession crowded to such an excess as to render competition for patronage a matter of business with many; and forcing some, in the struggle for sustenance, into the position of the poison-vending druggist in the play, when exclaiming

"My póverty, but not my will, consents."

The writer of this article, while an editor of a medical journal in a neighboring State, several years since, had occasion to discuss the question of medical education in all its diversified bearings, and ventured then to predict many of the evils which are now upon us. It was easy to foresee the result of the system of establishing medical schools at every cross-roads, and turning out graduated physicians, utterly ungrounded even in the elements of the profession. This milling process, however, has not been confined to the typical cross-roads; but when a professor in a certain metropolitan school asked a candidate for a degree, as the only question he had to propound, "How to make a mint-julep?" he simply stated the amount bid by his institution for popularity and patronage.

And when speaking thus of the "regular" profession (*sic passim*), we must not forget the accumulative sum of the *regular* quacks. They have their schools, too—their "courses" of study—their fees, and their diplomas.

Until medicine becomes (if it ever shall) an exact science, and like astronomy, mathematics, etc., there be but one arithmetical statement of the problems of health and disease, there must, of necessity, be all sorts of theories and all varieties of practices—much of the first wildly false, and much of the second intensely dishonest.

Of course, there must be a remedy for all these things, and possibly it may be found in advance of the millenium. But when it shall come to the world, it must come by agitation; it must come by the education of the people, and it must come through the schools and the masses of the profession. In some foreign countries, whose peoples are not supposed to be so enlightened as those of the "Great Republic," there are—

curiously enough—better methods for the protection of the population from empyricism than obtain with us.

If it were possible to make a medical diploma represent genuine qualification for the practice of medicine, (and some of our schools are undoubtedly laboring toward that end) and in case of those professing to dissent from the therapeutic theories of the "old school," to bear evidence of a thorough knowledge of such branches as are insusceptible of double interpretation—anatomy, chemistry, botany, mineralogy, obstetrics, operative surgery, etc., etc.—a long step would have been taken toward remedying present evils. How much of this, however, must be done by the State; how much by the schools of medicine, and how much by the profession at large, are interesting questions, admitting of wide discussion.

The writer has his own views upon the subject, and may be tempted to express them upon a future occasion. At present, his remarks have so far exceeded the limits which he designed for them, that he almost deems an apology necessary for their length, though he considers none requisite for their apparent warmth and energy. He believes that it has become too largely the custom to speak of the things herein treated, in guarded sentences, and almost with bated breath, as though their mere mention involved a lack of dignity, or a dangerous confession. Charity, it has been said, is the greatest of all virtues, but the time often comes when it is a mistaken policy, and an absolute injustice to the general welfare. Respectfully,

C. A. Logan.

99 Ashland Avenue.

THE NUISANCE CREATED BY RENDERING TANKS AND MANUFACTURE OF FERTILIZERS.

While in Boston a few weeks ago the inquiry was made of me by a gentleman, and with much levity, if Chicago still regaled her citizens "and the stranger within her gates" with the delightful odors borne on the breezes from Bridgeport and the stock yards. To the average citizen of Chicago, levity associated with such an inquiry would be classed with that

which good old Parson Kennedy, of Connecticut, termed the "damning levity of sin."

To the stranger it may seem a very ridiculous thing that a great city of 500.000 inhabitants with commercial interests and relations second to few, and a business sagacity, enterprise and energy, second to no city in the world; with a municipal organization "honest, capable and faithful" and with all its legal machinery intact, should suffer itself to be outraged for twelve years by one of the most intolerable nuisances that ever afflicted a people; but the citizen will recall the fact that a great industrial interest in the hands of a compact, able directory, and backed by a capital of more than $20,000.000 is not very ready to listen to the complaints of one or many individuals, and particularly if any effort to change the old and established order of things, will possibly exhibit itself on the wrong side of the ledger. And he will recall the other fact, that attacks upon it have seldom been organized, methodical and persistent, but rather fitful and frantic. Since it can be demonstrated that a process of rendering animal matter and manufacture of fertilizers can be conducted in a perfectly inoffensive manner, the time has come when the energies of those engaged in the business, should be expended in another direction than constructing tall chimneys in order to diffuse their fearfully offensive odors to a greater distance, and when summoned to appear in court, presenting themselves with their troup of laborers and retainers to swear that the premises are sweet as banks of flowers in June. The time has come when the citizen should regard it as one of the highest political duties, and a paramount social obligation, to insist that the issue should be squarely made and the following declaration of faith and work accepted by all, either the business referred to must be conducted in an inoffensive manner, or the business must move, or the city of Chicago must move.

There are gratifying indications that the more intelligent and honorable men engaged in the work, are disposed to co-operate with the authorities in an effort to remove the cause of complaint.

It is the purpose of this paper to show the amount of ma-

terial rendered and manufactured into fertilizers within the limits of the city, and within one mile of its limits; the source and character of the offensive gases generated, and the methods by which a suppression of this great evil may be accomplished. There was slaughtered last year within the limits before mentioned

299,020	Beef Cattle,
3,058,444	Hogs,
168,170	Sheep.

Each beef is estimated to yield 50lbs. of offal, the hog 20lbs. and the sheep 7lbs.; a total of 77,277,070lbs. of animal matter for the rendering tanks. This will include head and feet, but not the blood, of which there were 224,500 barrels of 32 gallons each. In addition to this we must bring the odds and ends, bones, scraps, etc., from all the markets, the decayed fish, and the beef found in the markets and slaughtering houses and condemned by the sanitary inspectors as unfit for food—of which there has been condemned and thrown into the rendering tanks, from April last to this date, 126,400lbs.

In the disposition of this immense amount of animal matter often in all stages of decomposition—and the animal tissues containing fat are much more subject to rapid decomposition than other portions of the animal—the first process is to extract the tallow and fat from the mass and thoroughly separate the soft tissues from the bone. This is accomplished in steam-tight, iron tanks, of from 8 to 10 tons capacity, into which the crude material is thrown and subjected to a cooking for several hours by a steam pressure of from 40 to 60lbs. to the sq. inch.

The slaughtering and packing houses of our neighborhood have an aggregate of 237 tanks as above described.

It is during this exposure to great heat within the tanks that the foul gases are generated, and if conducted directly within the flue from the tanks, it is practically impossible to construct a chimney so high that the gaseous and noxious effluvia will not diffuse themselves, to cool and descend upon the surrounding neighborhood.

These gaseous products of heat and decomposition are the various sulphur combinations, sulphuretted hydrogen, phosphuretted hydrogen, and ammoniacal gases, and they may be more or less offensive, depending upon the degree of decomposition taken place in the raw material before the cooking has begun. Nevertheless, under any circumstances and no matter how fresh the materials, there will be given off offensive odors during the melting process under such great heat from the nitrogenized matters always in combination with such material.

Again, if the freshest fats are subjected to a heat of 500° Fahrenheit, they begin to undergo a decomposition; the base glycerine is decomposed and a product called acroleine—an exceedingly acrid and irritating vapor—is set free. Methods have been proposed by science for the extraction of these fats from the raw material by means of the hydro-carbon oils, and by naphtha; also, by using bi-sulphide of carbon, in which the yield is much greater and the product said to be superior. These are patented but not well understood in this country, although extensively applied in Germany and France (Moreau Morris). The attempts made to destroy these gases by "condensing," washing, burning, etc., etc., have been numerous, but rarely scientific, and not largely successful as this community will testify. The old and rude process of the open kettle, with its unrestricted escape of steam and gases, is more satisfactory than the modern steam-tight, boiler-iron tank with its escape-pipe leading directly into a chimney 200 feet high, for in the one case the gases are left nearer the ground and localized, while in the other they may be carried by the winds for miles before sufficiently cooled to fall. That these gases cannot be destroyed by simply conducting them into or under an ordinary furnace fire of from 500 to 800 degrees of heat, will be understood by any one who comprehends their nature and composition, yet this has been the usual method pursued in our vicinity. The sulphur compounds are undoubtedly destroyed by combustion, but the ammonia with all the fetid products held in association with it, pass unchanged up the flue. The process of "condensing," for which much is said and

claimed by those interested in the operation, is equally fallacious, for by passing the gaseous products evolved from the rendering tanks through large volumes of cold water, nothing is effected except the condensation of the steam into water, leaving the gases dry—but ammonia will not burn, wet or dry, without special apparatus for its combustion.

There are two methods in practical operation to-day by which these offensive products are satisfactorily destroyed. The first was patented by Lockwood & Everett, of New York, in 1865, and is now in successful practice there. Steam-tight iron tanks are used for the reception of the offal, and these tanks are heated by steam applied upon the outside only.

The offensive gases are forced by the pressure evolved within the tanks, through an iron pipe, which passes over them and is connected with each tank by a short connecting pipe, into a system of iron coils which are placed in a separate and independent furnace ; here they are subjected to a heat of from 1500 to 1700 degrees Fahrenheit, and thus superheated, they are brought by an ingenious and scientific arrangement of argand burners in contact with the flame of a furnace in combination with sufficient oxygen to produce a perfect combustion and without a trace of offensive odor remaining.

The second process which I shall describe was the experiment of Mr. James Turner, of this city, which resulted in Turner's patent (1872), which has been modified and patented by Mr. Dennis Wood, also of this city. The process is essentially the same in both patents, the modification consisting of a different apparatus for condensing the steam. The same steam-tight tanks and conducting pipes are used as in the New York patent, but by our process heat is applied to the mass by carrying the steam within the tanks. The gases commingled with the steam are forced through the conducting pipe into the bottom of a large tank of cold water, which is constantly renewed ; the gases rise through this body of cold water, the steam is condensed, and the dry gases collect in the upper chamber of the tank. From this chamber they are conducted by a pipe into the bottom of an iron tank partially filled with gasoline or other of the lighter distillates of coal tar. As the

gases rise through this highly inflammable material they become charged with it to such a degree that when conducted under an ordinary furnace they burn with fierce intensity.

When thus charged, they may be conducted over the building and used for illuminating purposes, as is done at Mr. Turner's establishment.

By either of the processes referred to, the noxious gases from rendering tanks may be entirely destroyed.

There remains still another source of great offence. When the contents of the tanks are sufficiently cooked, the steam is shut off, and when cooled down the material is drawn into large wooden vats at the base of the tanks. As they cool the fats are skimmed from the surface, and the remaining material is removed in carts to the houses for the manufacture of fertilizers. This process—the conversion of the tank material into a commercial fertilizer—is simply driving off the water from the "tankings" to about 13 per cent., and grinding the dried product.

The drying machine generally consists of a revolving cylinder, thirty feet long and three feet in diameter, inside of which are arms for the purpose of comminuting and breaking up the material. The heat is supplied by fires underneath, and in some instances a current of hot air passing through the cylinder.

When in position that end is highest where the material is fed into the dryer; the refuse constantly revolving and agitated by the projecting arms, is kept in motion until it passes out at the other end in a dry state.

From two to ten tons can be passed through in an hour. (Ben. C. Miller, paper read before Public Health Association, Philadelphia.) In these houses also the blood is received in barrels from the slaughtering houses, and after being treated with sulphuric acid (to fix the ammonia in the stable form of sulphate of ammonia), it is passed through the dryer in the same manner as the tankings. Passing through such intense heat and drying so rapidly, the volume of steam and gases evolved are so enormous that the various processes in use for condensing or burning, have proved entirely inadequate and unsatisfactory.

It is probably true that destruction of these gases by chemical decomposition is the only practical method of dealing with them. As a tentative measure in this direction, the following means have been devised. It was found, by experiment in a small way, that by passing these gases through a solution of per-nitrate of iron, or over surfaces covered with this salt, the offensive odors were entirely destroyed. The problem to be solved, then, was simply this: by what means can the large volume of gases from the drying cylinders be brought into contact with this salt so intimately as to be completely decomposed?

At the house of Messrs. Oberndorf & Shepherd, (stock yards) a matched plank, steam-tight box, was built 20 feet long by 10 feet broad, and 10 feet deep. Ten matched horizontal partitions were built within the box, one foot apart, and each partition four inches short at alternate ends. Each partition, from its attached to its free end, has a fall of a half inch. The spaces between the partitions were stuffed full of sheet iron scraps, amongst which was placed in each space from 15 to 20 lbs. of nitrate of potassa.

Entering the lowest space at the end of the box is a conducting pipe, two inches in diameter, from a little sheet iron stove or furnace near by, in which brimstone is burned. The gases from the drying cylinder are drawn into a pipe 18 inches in diameter by an iron fan, making 2,000 revolutions a minute, and this pipe enters the box in the same space as the pipe from the brimstone furnace. The gases after passing backwards and forwards between the partitions, escape from the upper space through a short pipe, with all offensive odors destroyed.

This box has been in operation about 60 working days, and it is found that 40 lbs. of brimstone, costing $1.30, will destroy all that is offensive in the drying of 20 tons of fertilizer, which is the average day's work at this house, when running.

The modus operandi is as follows: The sulphurous acid, generated by the combustion of brimstone, receives the equivalent of oxygen necessary to convert it into sulphuric acid, and acting slowly, but with sufficient energy, upon the nitrate of potassa to chemically decompose it and set free nitric acid

fumes. These fumes, coming in contact with the iron through which they pass in all directions, form the per-nitrate of iron, which coats each surface of every iron scrap; any excess of the iron salt is taken into solution by the steam which comes in from the dryer, and this solution slowly passes along each partition, dripping from the free end of the upper one to that below, and along that to the next, and so on to the bottom, where it is collected in a vessel to be used as a disinfectant about the premises.

It will be observed that the gases entering the box below must pass not only over 2,000 feet of board surface, covered with the solution of the iron salt, but also over the immensely multiplied surface which each iron scrap presents.

The cost of the box filled and ready to work is less than $150, and I infer from the work so far that the box will not require to be refilled oftener than every four months. This can be easily done by removing one end, and at a cost of about $30. It only remains to report the result of the years work in attempting to suppress this great nuisance.

On the first of January, 1877, there were only 8 tanks connected with an efficient apparatus, to destroy their gases, to-wit:

Mr. James Turner, - - -	4 tanks.
Mr. Dennis Ward, - -	4 "

The remaining 229 tanks, when in operation, were pouring their noxious odors sometimes directly into the out-of-doors, sometimes under the furnace, to escape at the top of the chimney, sometimes into a tank of water to be "condensed," and from there to the flue and out; but whichever way they passed the result was the same—an intolerable stench "going with the wind."

The following houses have recently connected their tanks with a perfectly satisfactory apparatus:

Turner Bros., - - - -	2 tanks.
Shönemann & Co., - -	5 "
O'Malley & Sons, - - -	4 "
J. L. Hancock, - - -	6 "
J. E. Smith, - - - -	4 "
J. Flanigan, - - -	2 "
E. D. Chapin, - - - -	4 "

The following houses are at this date putting in, and by Dec. 1st will have completed the same apparatus:

Fowler Bros., - - - - -	10 tanks.
Hutchinson, - - - -	35 "
Higgins, - - - - -	15 "
Bottsford, - - - - -	8 "
B. F. Murphy, - - -	15 "

Making a total of 118 tanks in operation without offense.

There are 53 tanks in houses at present closed, and 66 tanks in houses, the proprietors of which have up to this time refused or neglected to correct their evil work. "No business detrimental to the public health, and which is carried on in defiance of great sanitary laws, positively neglecting to adopt the remedies at hand, should be tolerated in civilized communities."

OSCAR C. DEWOLF, M.D.,
Commissioner of Health.

CITY HALL, CHICAGO, Nov. 15th, 1877.

BOOKS AND PAMPHLETS RECEIVED.

An Index of Diseases and their Treatment. By Thomas Hawkes Tanner, M.D. Second edition, revised by W. H. Broadbent, M. D. Philadelphia: Lindsay & Blackiston. 1877. 8vo. Cloth, pp. 432.

A Treatise on Gonorrhœa and Syphilis. By Silas Durkee, M. D. Sixth edition, with eight colored illustrations. Philadelphia: Lindsay & Blackiston. 1877. 8vo. Cloth; pp. 467. Price, $3.50.

Index Seminum, Anno 1876, Collectorum quæ Hortus Botanicus Chicagoensis pro mutua Commutatione Offert.

Allgemeine Resultate Nach Bezirken und Kantonen betreffend die Trauungen Geburten und Sterbefälle im Jahre. 1876.

Walsh's Physicians' Combined Call-book and Tablet, from 18— to 18—. Third edition. Published by Ralph Walsh, M. D., 326 C. St., Washington, D. C. Price, $1.50.

Walsh's Physicians' Handy Ledger.

The Causes and Geographical Distribution of Calculus Diseases. By Claudius H. Mastin, M.D., of Mobile, Alabama. Extracted from the Transactions of the International Medical Congress. Philadelphia, September, 1876; Philadelphia, 1877.

The General Subject of Quarantine, with particular reference to Cholera and Yellow Fever. By John M. Woodworth, M.D.

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Summary.

I. Surgery.

Amputation of the Penis; Transplantation of the Urethra. Wedemeyer. (*Archiv der Heilkunde XVIII.*, 6.)—The ordinary method of amputating the penis is always followed by the great inconvenience that the patient cannot urinate in the erect posture without wetting his clothes. Prof. Thiersch has successfully overcome this difficulty in the following case by transplanting the remnants of the urethra into the perinæum.

In November, 1874, a man 48 years old, greatly emaciated, was admitted into the hospital with an epithelial cancer of the penis. The whole organ, from the urethral orifice to the roof, was the seat of one large ulceration, surrounded by hard, raised and everted margins. The urethra was exposed to the extent of two centimetres; in the inguinal regions existed a number of hard, indolent, enlarged glands.

Under the antiseptic spray the penis was amputated at its root. The cut surface did not exhibit any morbid changes in

the tissues. The profuse bleeding being arrested by catgut ligatures, the stump was secured by a strong catgut loop, and a catheter introduced into the urethra.

From the lower margin of the wound an incision was then carried along the scrotal raphé into the perinæum, thus dividing the scrotal sac into halves. By deepening this incision the surgeon could reach the urethra and dissect it off its surroundings towards the bladder to the length of two centimetres. This movable piece of the urethra was turned down to the perinæum and fastened to it by stitching the mucous lining of the urethra to the external integument. The whole wound was closed by catgut sutures; drainage tubes were put into both angles of the wound; a flexible catheter was kept in the transplanted urethra, and a salicylated dressing applied.

During the convalescence the patient had an attack of erysipelas, which caused his recovery to be rather slow. Still, in January, 1875, he had gained sufficient strength to undergo a second operation. A hard carcinomatous gland in the right inguinal fossa had to be extirpated. All the other indolent glandular tumors had disappeared by this time. In February he was discharged from the hospital. He could then, by raising the scrotum, discharge the urine at an angle of 45 degrees, in the erect posture, without soiling his clothes or his body. A re-examination, made a year later, showed the condition of the transplanted urethra and its satisfactory function still unchanged.

A Peculiar Extirpation of a Kidney. Langenbuch. (*Berliner Klin. Wochenschrift*, 1877. N: 24.) The author describes a highly interesting case of the successful extirpation of a pathologically changed kidney, which was taken for a tumor.

A robust woman, aged 32 years, suffered during one and a half years from heavy pains in the region of the left kidney. Palpation could detect a solid and somewhat movable tumor of six to eight centimetres diameter, sensitive to pressure, apparently situated in or outside of the lumbar muscles. The overlying skin was entirely loose.

It was supposed to be a malignant tumor; not, however, originating in the kidney, as the urine was free from abnormal substances, and the tumor appearing to be located in the muscular tissue. The apex of the tumor reached into the upper muscular layer, to which it was found adherent by cicatricial tissue.

The finger, passing round the exposed tumor, detected a pedicle which was ligated, whereupon the tumor was cut off below the ligature. Suddenly the ligature slipped off; but the expected profuse bleeding did not appear. Only small veins were bleeding. An aperture which could have belonged to a carotid artery emitted no blood, and admitted bougies to the length of 15 centimetres. It was the ureter. The tumor was the kidney, which was changed into a cicatrized sac. The histological examination showed a complete degeneration of the tissues, whose original structure could no longer be ascertained. An inflammatory process, which had destroyed the glandular tissue, was considered the cause of the formation of the sac, but it is difficult to account for the abnormal position in which the kidney was found.

MALIGNANT OSSEOUS TUMOR OF INFERIOR EXTREMITY OF FEMUR. —M. LeDentu. (*L' Union Médicale*, Oct. 16, 1877.) LeDentu presented an osseous tumor of the inferior extremity of the femur, to the *Société de Chirurgie* Oct. 10, 1877.

It was the case of a woman of 50 years, of usual health until four and a half years since, when she was first taken with a tolerably sharp pain at the lower end of the femur on a level with the inner condyle; this pain was the only appreciable symptom felt by the patient until Feb., 1875, when a swelling appeared, which made rapid progress during the year 1876, and reached a considerable size in 1877. On entering the hospital Oct. 1st., under the care of M. LeDentu, the tumor measured 25 inches in circumference. The skin covering it was intact, but of a violet color and furrowed by varicose veins. Above the tumor the member was comparatively enlarged. Careful examination with the finger, revealed a deep tumefaction, indicating an osseous tumor. The diagnosis lay between an osteo-sarcoma and an enchondroma.

M. LeDentu at first thought of sarcoma, but finally, after having examined a plate representing a specimen of Dupuytren's, which presented a striking analogy with that of his patient, he changed his mind and regarded it as an enchondroma. It appeared to him that the tumor of his patient had the consistence and elasticity of an enchondroma. Besides, the general state of the patient was not bad; there was no sign of cachexia, except a little leanness which was habitual with the patient; finally, a careful exploration of the internal organs revealed no visceral lesion.

In consideration of these facts, which seemed to remove the idea of a cancerous tumor, M. LeDentu proposed disarticulation of the thigh, which was immediately accepted. The operation was performed by the two flap method, one anterior, the other posterior. Nothing unusual presented. The vessels were seized as cut by the hemostatic forceps, and the ligation of the femoral was reserved for the end of the operation. Toward the middle of the operation, however, the patient, who had been carefully chloroformed, presented symptoms of depression, from which she was brought by means of friction and flagellation.

The operation was then completed; the wound was united by means of three deep sutures and several superficial ones; four drainage tubes were inserted, and finally the dressing of Lister was used with all the minute precautions indicated by its author. Although M. LeDentu regards the case as very grave, yet he hopes, from all these conditions, that the patient may recover.

Examination of the specimen with the naked eye seems to confirm the diagnosis of M. LeDentu. The appreciable characters are those of enchondroma. The cartilaginous element seems to constitute the fundamental part of the tumor. The bone seems to have undergone profound alteration, even to the medullary canal, which is itself far from being healthy. M. LeDentu closed by saying that it was necessary to await microscopic examination, before pronouncing definitely upon the nature of the tumor.

The communication of M. LeDentu gave rise to an interest-

ing discussion, in that it brought out the uncertainty which still exists on the subject of diagnosis and pathological anatomy of tumors, designated under the names osteo-sarcoma, enchondroma, cancer of the bones, etc.

M. Gillette regretted that M. Le Dentu had not dwelt at greater length upon the symptomatology of his patient, in particular on the character of the symptom, pain. In osteo-sarcoma, the spontaneous and the provoked pains are generally very sharp, and permit us to distinguish clinically this class of tumors from those designated as enchondromas, in which the pains are less severe. M. Gillette showed that the articular cartilages, in the specimen of M. LeDentu, remain intact.

M. Honel distinguishes two kinds of enchondroma, the benignant, which has no tendency to become general, and the malignant, which resembles cancer in its tendency to generalization; he thinks that the case of M. LeDentu belongs to the latter; the bone is as profoundly altered as possible, the alteration having reached the medullary canal already, the seat of intense osteo-myelitis. He does not believe that the patient of M. LeDentu can be saved.

M. Duplay thought it impossible to pronounce absolutely upon the diagnosis of the tumor, or the prognosis of the operation, after a simple examination of the specimen with the naked eye. This extremely complex specimen has the characters of sarcoma, of myxoma, and of enchondroma. Whatever it may be, M. Duplay believes it susceptible of early recurrence.

M. Déspres declares it a cancer, and bases his diagnosis upon the age of the patient, the date of the disease, four years, and finally on the general loss of flesh noted by M. LeDentu.

M. Marc Sèe has had occasion to observe at the *Maison Municipale de Santé* a little girl, who had a tumor situated at the upper extremity of the humerus, very close to the scapulo-humeral articulation. The rapid development of the tumor, which had distended, thinned, and inflamed the skin, obliged M. Sèe to disarticulate the member. The results of the operation were at first favorable, but cicatrization was not yet complete when several other tumors developed upon various portions of the head; the affection had become general.

M. Lucas-Championnière had seen a patient treated by M. Guyon with an enchondroma of the thigh, by disarticulation of the member. The patient got well of the operation, but died several months after, of cancer of the lung.

M. Amédée Forget said that under whatever name the tumor was designated, for diagnosis and prognosis, regard should be had, above all, to the clinical characters. For his part, the rapid development of the tumor would have made him fear a malignant tumor, and he would have abstained from interference. It is well to operate, but better still to abstain, when the operation must be fatally followed by recurrence. He asks if there is not in the present state of science, clinical characters indicating to the surgeon whether or not to operate. This point seems to him more important than the determination of the histological differences between tumors, a determination generally sterile in a practical point of view.

M. Nicaise saw a patient, in his service at the temporary hospital, with sarcoma of the leg, who had not experienced any morbid phenomena, except very sharp pain, which came on suddenly while walking, obliging him to stop and be carried home. The tumor appeared at once, and grew rapidly, acquiring in some weeks the large size it had when he entered the hospital. M. Nicaise amputated the leg, but the tumor recurred in the same place before the wound healed. The patient died of a recurrence in the lung.

M. Duplay had also seen a case of sarcoma of the calcaneum, long taken for an osteitis. He amputated, but in less than a year it recurred in the soft parts of the stump.

M. Marjolin thinks we should not hasten to conclude, after these recitals of recurrences after operation, that it is always best to abstain from operating in osseous tumors. We might thus allow patients to die that an operation might save. He remembers an operation he performed in the middle portion of the thigh of a *réligieuse* suffering from an osseous tumor, which distinguished surgeons of the hospitals, Michon, Herneyde Chégoin, and Désormeaux, had judged to be of a malignant nature. Now the operation was performed twenty years ago, and the patient still lives.

M. LeDentu, in answer to the various observations of which his communication had been the object, said that the pain did not offer any character sufficient to distinguish sarcoma from enchondroma, in spite of the affirmation of M. Gillette; as to the general state of the patient, he repeated that he had observed no sign of cachexia; the emaciation which she presented was normal, and belonged to the constitution rather than to the malady; if there had been cachexia he would naturally have abstained from operating. He recognized the gravity of the case. The rapidity of the development obliged him to consider it as malignant. But is that a reason for believing the case incurable, and to leave the patient to die rather than interfere? He did not think so. Science has no certain sign, either histological or clinical, which permits the distinguishing curable osseous tumors from those which are not so. In cases of doubt we should not abstain from operating, lest we allow patients to die, as M. Marjolin has said, which an operation might have saved. M. Marjolin is not the only surgeon who has seen patients get well after operations on osseous tumors regarded as malignant. Such examples are not rare, and he knew of several. In cases of doubt, then, we should act; sometime science may be able to tell in what cases it is best to abstain from operating.

L. W. C.

Ingrowing Toe-Nail,—Dr. A. H. Agard, of Oakland, Cal., contributes to the *Trans. Medical Society, California*, for 1876–7, an interesting paper on this frequently suggested and poorly understood subject, much neglected in the text-books. Neither Fergusson nor Hamilton allude to it; Druitt and Erichsen each give it a paragraph; Holmes, in his *Treatise on Surgery*, gives it twenty lines; Gosselin, in his *Clinical Lectures on Surgery*, devotes nine pages to it; Gross, one.

The toe-nail grows from a matrix which lies in a fold of the skin near its base. In a large majority of cases it comes forward with a thickened recurved margin at either side, which lies in a groove in the soft parts that run from the matrix to

the end of the digit. Thick nails are often provided with recurved margins embedded in deep sulci on the sides of the digits. Dr. A. believes this conformation predisposes to the disease; also that it is often hereditary.

Anything may be an exciting cause that forces the incurved margin to impinge upon the skin lining the bottom of the groove, so as to bruise or irritate the parts. The most fruitful causes are wedging the foot into a narrow, funnel-shaped, stocking, wearing loose boots with high heels, cuneiform shaped toe, or boots too narrow for the foot.

The sulcus on the outer side of the great toe suffers oftenest; the lateral pressure operates first upon the inner and anterior angle of the nail, and the effect is to push the nail outward and to sink the margin deeper into its groove. With the increasing pressure, there is set up in the cuticle an effort to protect the true skin beneath. Epidermic cells are thrown out and left to harden into a protective covering. These, as they are cast off, are held in place by the margin of the nail until they form a hard pad under it, which becomes an offensive mass, having much of the tenderness that belongs to a true corn. The lateral pressure also forces the second upon the margin of the great toe, folding the inner border of the matrix under. This condition becoming permanent, (it is in youth that the disease is contracted) malformation of the nail with true inversion of the border results.

A curious and important point in this connection, is this: In walking, just at the last of each step, the weight of the body is thrown upon the end of the great toe. Especially is this true of the Caucasian who "toes out," but the Indian "toes in" by throwing himself forward in a loping gait, with a spring from all the toes. Place the femurs of an Indian and white man upon the table, resting upon their condyles at their lower end and upon their shafts at the other, the white man's femur will be found to rise but little, while the Indian's gives a very obtuse angle with the surface of the table. Place the head of each bone in its acetabulum, attach the foot and leg, and it can at once be seen what causes the difference in the gait. Not only the weight, but the last act in complet-

ing the step, forces the flexor muscles of this toe into action. But when the lateral expansion of the soft parts is denied, it finds room in the direction of the least resistance, which is at the front of the nail. The nail groove is converted finally into a pocket or pouch, into which the outer angle of the nail is pressed.

One predisposed to this disease, suffers first by a simple itching or tingling, not unlike that of a corn; occasionally severe twinges of pain are felt. Swelling and heat are then discovered, any slight injury causes an ulcer, and intense pain ensues.

In the *first* stage of this trouble, cut the nail short, trim both corners well back, keep the front rasped thin, and avoid exciting causes. If ulceration has taken place, relieve the bottom of the groove and the toe-nail pocket from pressure.

Two plans of treatment are proposed; the one temporizing, the other radical; for the former, remove the toe-nail, which gives relief, till a new one develops; or trim the free border of the nail back to the base, relieving the pressure, but take care to leave no spicula or sharp edges. This operation Dr. A. prefers to the former method, but it must be repeated every few months.

Three methods for radical cure deserve mention.

1. Removal of entire nail and matrix. The objection to this is that it leaves the top of the toe unprotected.

2. Removal of merely the margin of the nail with its matrix. The nail will remain narrower, and the recurring margin never be renewed.

3. Removal of soft parts along the border of the toe, taking away the groove and obstructing the growth of the angle of nail. This least objectionable method is as effectual a cure as removing the nail, but care should be taken to effectually ablate the nail growth and remove the upthrust of indurated tissue anterior to the outer angle. When the deformed matrix sends forward a malformed margin, remove both margin and matrix. In rare cases it may be proper to combine two operations in removal of margin of nail and side toe.

General anæsthesia is unnecessary; local application of

snow, ice, or freezing mixture, is sufficient. When engorgement of tissue is extreme, the hemorrhage may be great, but no harm can follow.

Dr. A. dresses the wound with salicylic acid in substance, using the dry powders; and orders the dressings to be kept wet for a few hours with cold water. Profuse granulations should be repressed, but they do not come up under the use of salicylic acid. M. E. K.

Instrumental Dilatation of the Rectum for Operative Purposes. W. Hack. *Archiv. fur Klin. Chirurgie.* 1877. Bd. XXI. Hft. 2.—The operation is performed, after the rectum is carefully cleansed, in profound chloroform narcosis. The patients are placed upon the table on their backs, with pelvis elevated, the thighs strongly flexed upon the abdomen. With the well-oiled speculum (Simon used them from 5 to 5½ ctm. in diameter, and from 15 to 17 ctm. in circumference), the rear wall of the rectum is pushed aside; the side walls are held back by a vaginal tenaculum, and the projecting skin of the anus by double hooks, or by a flat speculum. If necessary the sphincter is cut backwards in the raphé, as such incision into the lower end of the rectum facilitates the access to the cavity of the os sacrum. In cases of recto-vaginal fistula, the edges of the fistula are now pared off, if possible transversely; the sutures are partially put in by the means of Simon's needle-holder, and fine Chinese silk; or with Langenbeck's needles, used for staphylorrhaphy.

In the after treatment a strong cathartic was administered by Simon, at least every second day, the method of constipation having proved dangerous. The removal of the sutures is effected through the vagina; the slight formation of pus around the threads had always enlarged the canals of the stitches sufficiently to admit of the passage of the knots. The cases operated upon by Simon present the best proof of the practicability of his method; we can here only speak of them in a few words. The first case was a person with two small vesico-vaginal fistulæ, and a large recto-vaginal fistula. The fistula was unsuccessfully operated upon through the

vagina, whereas the cure was effected by two operations from the rectum; the vesico-vaginal fistulæ were also cured. In a second case, a woman 45 years of age, was cured of a recto-vaginal fistula, which was immovable, and situated 1 ctm. from the orifice of the uterus.

The third case occurred in a woman, 32 years old, who had contracted a recto-vaginal fistula during an attack of typhus, the tube of the injection syringe having perforated an ulcerated place of the rectum. The fistula was cured after an operation through the rectum, only leaving small places of the size of a pin's head, which afterwards healed up under cauterization.

The fourth case is that of a soldier, who had contracted two fistulæ by a gun-shot wound through the bladder and rectum.

The fifth case gives the best proof of the practicability of this method. The patient, 22 years old, suffered from a vesico-vaginal fistula, besides there existed a communication between the bladder and the rectum, and an occlusion of the vagina.

FAT-EMBOLISM RESULTING FROM RUPTURE OF A FATTY LIVER. —Hamilton. (*British Med. Journal*, Oct. 6, 1877.) Fat-embolism is a pathological lesion which has been described within the past few years more especially by Zenker, Wagner and Busch. It generally happens that the subject of it has sustained a fracture of bone, or some operation has been performed necessitating the opening of the medullary cavity of a bone. The oil which so escapes into the surrounding parts becomes absorbed by the neighboring blood-vessels and is carried to the right side of the heart, and subsequently to the lungs. Here it gives rise to the most complete capillary embolism, entirely precluding the passage of the blood through the organ, the patient accordingly dying from gradual carbonic acid poisoning. These cases of death in a few hours after a simple fracture of bone, or operation on bone, were, up to the time that this important discovery was made, totally unaccounted for; the patient was generally said to have died from "shock." In the case here reported the oil, which acted as embolon, was derived from an unusual source. The patient

was a lad about fourteen years old, and a sailor. While aloft he slipped and fell a considerable distance onto the ship's deck, alighting on his right side. Although stunned, he soon recovered sufficiently to walk about the deck. In an hour or two afterwards, however, he became very much distressed; his breathing became embarassed, coma ensued, and he died a few hours after the injury. At the post-mortem examination, the liver was found to have sustained a few small ruptures, from which a little blood had flowed, but only a comparatively small quantity. The liver itself, however, was *peculiarly fatty*, and, for a lad of his age, unusually so; whereas the other organs seemed perfectly normal, so that the lungs and kidneys were retained as specimens of healthy organs, and were hardened in chromic acid for microscopic examination.

In due time, sections were made of the lung and kidney, and in order to bring out their outlines more prominently, a half per cent. solution of perosmic acid was employed as a staining re-agent. The most extraordinary appearance was revealed by this means in the lung. The whole of the middle and smallest sized arteries were found to be plugged with oil, which now had a black color, owing to the action of the perosmic acid. Even the minutest capillaries were completely choked up with oil. The oil was generally in one large elongated mass, occupying the lumen of the vessel for a considerable distance, or it was in drops of various sizes closely aggregated together. Similar embolisms were detected in the kidneys, but only in small number.

II. Therapeutics.

Effects of Sulphate of Atropia on the Nervous System.—Sidney Ringer. (*Journal of Anatomy and Physiology, from Edinburgh Medical Journal*, July, 1877.) From his experiments, Ringer concludes that the late occurrence of tetanus in atropia poisoning, is not due to paralysis of the motor nerves, but that it is owing to the cord being slowly affected. It appears that whilst the poison very quickly paralyzes, it takes many

hours, or even days, before it tetanizes. He also concludes that atropia paralyzes much more through its depressing action on the spinal cord than on the motor nerves, and that it has a direct paralyzing action on the cord, and does not affect it through its depressing action on the circulation. In atropia we have a drug which quickly paralyzes the reflex functions of the cord, but requires a much longer time to diminish the resistive power of the cord; hence, paralysis precedes, and may even disappear, some hours before the onset of tetanus.

BROMIDE OF ARSENIC IN THE TREATMENT OF NERVOUS DISEASES.—Clemens. (*Allg. Med. Central-Zeitung.*) Cl. states that he has obtained astonishing results with bromide of arsenic in the treatment of diseases of the nervous system, and especially epilepsy. The following is the formula which he thinks should replace Fowler's solution: Pulv. arsenic alb., potass. carb., aa ʒj.; coque cum aq. dest., ℔ss. ad solut. perfect.; aq. evaporat. adde aq. dest., ʒxij.; brom. pur. ʒij. refrigerat. S. arsenic bromatum. Of this he gives one or two drops in a glass of water once or twice daily. This dosage may be continued for months, or even years, without producing any unpleasant effects. In only two cases of epilepsy did he effect a complete cure, but in all the cases, marked relief was obtained. In connection with the bromide of arsenic an almost exclusively meat diet is advised. The patients should be as much as possible in the open air. Unlike the bromide of potassium, the arsenical salt does not require to be given in increasing doses, and, instead of interfering with digestion, improves the nutrition and strength.

ACTION OF THE SALTS OF SILVER ON THE MUSCULAR AND NERVOUS SYSTEMS.—Curci. (Giornal. Veneto di Scienze, from *Edinburgh Med. Journal*, July, 1877.)

In a series of experiments on the action of silver on the muscular and nervous systems, Curci used one part of chloride of silver, three parts of hypophosphite of soda, and thirty of distilled water. Administered thus, silver does not irritate the skin or mucous membrane. Injected subcutaneously, it pro-

duces slight inflammation and œdematous swelling, but is easily absorbed, and does not coagulate the blood. Curci concludes that it acts on the sensory nerves, and through them on the posterior column of the cord. It first stimulates them and increases sensibility to pain, raises reflex excitability, and extends its action to the motor portion of the cord, producing tetanus and increased muscular tone. It increases muscular irritability, and paralyzes secondarily the sensory nerve-centres, especially the respiratory centre. At length it annihilates reflex excitability, respiration and circulation cease, and the heart remains in a state of diastole. C. thinks that these results show the inefficacy of silver in the diseases for which it has been hitherto in repute—myelitis, paralysis agitans, and locomotor ataxy. Where there is softening or induration, proliferation of connective tissue, and destruction of nerve-elements, and where the muscular tone is weakened, no good action can be expected from a medicine which itself produces these conditions. Silver may be used beneficially in cases of epilepsy which depend on excessive irritation of the spinal cord, but it exerts no effect in those due to anatomical lesions. In hysteria it is useless, but is beneficial in chorea. Its administration in nervous asthma may be attended with excellent results, and as it reduces the irritability of the respiratory centre, it would most probably be especially useful in cases attended with spasm of the inspiratory and bronchial muscles.

Medical News and Items.

THE ILLINOIS STATE BOARD OF HEALTH has issued the following circular which will explain itself.

CHICAGO, Nov. 10, 1877.

TO THE MEDICAL PROFESSION OF ILLINOIS:

To facilitate the obtaining of the Certificates for Practice issued by this Board, and the registration of births and deaths, required by State law, the following information is furnished:

All persons (whether male or female) practicing medicine, in any of its departments, in this State, are divided into two

classes. First, practitioners who have been practicing medicine ten or more years, within this State. Second, those who have been practicing medicine in this State for a period of time less than ten years, from July 1, 1877.

This second class is divisible into two sections: First, those who can furnish satisfactory proof of having received diplomas as graduates in medicine; or licenses, from some legally chartered medical institution in *good standing*.

Second, those who are practicing medicine in any of its departments, who have neither a diploma or license, (and who are required by law to undergo examination by the State Board, for its certificate entitling them to practice medicine and surgery in the State of Illinois.)

Section four of the State Board of Health Act, requires that all physicians and midwives, without any exception, practicing in this State, shall register their names and postoffice address with the County Clerk of the county where they reside. This is now being enforced, and the signatures of all are required.

Physicians are likewise required to have recorded in the office of the County Clerk, the Certificate which may be received from the State Board of Health; and, in case of removal to another county in the State, to have the certificate recorded in that county also.

In case a physician practices in another county, or counties, in this State, adjoining the one in which he lives—he having recorded his Certificate in the county in which he lives—it will not be required of him to place his Certificate upon record in the other county or counties; but he must register his name, also, in the county or counties in which his practice extends, and make his returns of births and deaths occurring in those counties to the respective County Clerks. No such registration will be required in cases of professional consultation with resident physicians.

Physicians residents of adjoining States, who practice in this State in counties adjoining the one in which they reside, are required to take out Certificates of Practice, as required of residents of this State, and record the same in the office of County Clerk of the county or counties in which their practice extends,

and to make returns of births and deaths in those counties to the County Clerk, and in every respect conform to all the requirements of the law upon residents of this State.

Certificates will, when desired, be issued to non-graduates of ten or more years practice in this State, on their affidavit of such practice, supported by evidence of good standing in a medical society, or the recommendations of reputable professional or other men, who have known them during their term of practice.

These Certificates are different from those granted to graduates, and are issued at the discretion of the Board.

Applications for Certificates, or for blank affidavits, or for appointments for examinations, may be made to the President, Dr. J. H. Rauch, 202 State street, Chicago. Diplomas, or licenses, and affidavits properly filled out and acknowledged, together with the fees for certificate, may be sent to the same office.

For convenience, diplomas, licenses, affidavits and fees may be sent from their immediate neighborhood to H. Wardner, M. D., Cairo; W. M. Chambers, M. D., Charleston; J. M. Gregory, LL. D., Champaign; N. Bateman, LL. D., Galesburg; and A. L. Clark, M. D., Elgin.

A special form of blank affidavit has been prepared for those who have lost their diplomas or licenses by fire or otherwise, and may be had upon application.

It is not required that the ten years of practice in this State shall be consecutive years; but the sum total of practice in this State must amount to ten years, from and before July 1, 1877. No allowance is made for the time in practice in any other State, or service in the army.

Certificates of graduation will be issued to graduates who have practiced medicine ten or more years in this State, upon their making an affidavit to that effect, at the same time giving name of College, place and date of graduation, without their being required to send diploma to the Board for verification, by paying the usual fee. It is not obligatory upon this class of practitioners to take out a Certificate.

In view of possible legal questions in practice, it will, no doubt, be better for all who can obtain Certificates to do so.

Owing to the fact that many of those who have been in practice over ten years supposed that nothing at all was required of them, the Board addressed a communication to Hon. J. K. Edsall, Attorney General of the State, asking what construction the Board should put upon this part of the Act, and their duty. His reply was as follows:

"The proviso in question is in these words: '*Provided*, that the provisions of the Act shall not apply to those who have been practicing medicine ten years within the State.' I have no question that the effect of this proviso is to exempt all persons who fall within its terms, from the penalties imposed by the Act in question. But, considering the entire scope of the Act, I am of the opinion that the duty is incumbent upon your Board to ascertain, as far as practicable, the names of all those who are entitled to the benefits of that proviso; and that it is the duty of those who have thus practiced medicine ten years within the State to furnish you, on request, evidence of the fact by affidavit, or otherwise. Your Board may, with propriety, issue in return some proper certificate, which will show their right to practice under that proviso of the law."

All therefore who claim exemption from the penalties of the Act, in consequence of the fact of their having practiced medicine in this State for ten years previous to July, 1, 1877, and who have not procured Certificates, will be called upon by the Board, after December 31, 1877, to make affidavit to that effect, and file the same with the Board, thus establishing their status legally.

In regard to practitioners of medicine who have been practicing in this State less than ten years, the law requires that those who are graduates in medicine, or who have licenses from legally chartered medical institutions in good standing, must actually present, for verification, to the State Board, their diplomas or licenses, and, in addition, such other satisfactory proofs as may be necessary. Affidavit must be made that the person presenting the diploma, or license, is the lawful possessor of the same. Graduates may present their diplomas or licenses, and affidavits by letter or proxy. The affidavit should mention date and place of graduation, and

name of medical college; length of practice in this State, as well as present place of residence.

The fee for certificates of graduation is fixed by law at one dollar.

Certificates of Graduation must be recorded in the office of the County Clerk. In fact, it is better that all Certificates issued by the Board should be so recorded.

It is required by law that all persons practicing medicine less than ten years in any of its departments, who are not graduates in medicine or licentiates, shall be examined directly by the Board, and then Certificates will be issued to those passing the examination. The Certificate is to be recorded in the office of the County Clerk. Candidates for examination are required to pay a fee of five dollars, in advance—to be returned to them if the Certificate be refused.

Examinations may be, in whole or in part, in writing, or orally; and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

Meetings of the Board, for the examinations of candidates for Certificates of practice, and for the verification of diplomas and licenses, and taking of affidavits, are appointed for the following dates and places:

GALESBURG—Thursday, December 6th, beginning at 10 A. M., at the Union Hotel.

CHAMPAIGN.—Thursday, December 20th, beginning at 10 A. M., in the parlors of the Industrial University.

SPRINGFIELD.—Thursday, January 10th, 1878, at 10 A. M., at the State House (the regular annual meeting).

Meetings for examination will also be held at Charleston and Chicago, in January, and other points, the location to be determined by the proximity of applicants, as the Board does not wish to cause any unnecessary loss of time to candidates for examination. The dates of these meetings will be duly announced.

Practitioners who are required by law to be examined—namely, those who have neither a diploma or license, and have practiced medicine in this State less than ten years, must pre-

sent themselves in person before the Board. No examination papers can be sent out to individuals; and no examination can be limited to any one or two special topics, or branches of study or practice. The examinations will be conducted by the entire Board, and upon all branches usually taught in medical schools.

Questions relating to special methods or forms of practice, or therapeutics, will be referred for examination to the various individual members of the Board, as may be indicated.

A proper and reasonable regard and respect will be paid to the personal and peculiar views of practice, if any such there should happen to be, of the candidates presenting themselves for examination.

Candidates for examination must fill out a blank form, which may be obtained on application. This must be sent to the office of the Board, and, if approved, they will be notified to appear for examination.

The forms pertaining to the State system of registration of births, deaths, and marriages, are now prepared, and on and after December 1st, registration will be enforced. It is to be hoped that there will be a prompt and cheerful compliance with this, one of the most important sanitary and civil measures ever inaugurated in this State.

Much time and correspondence may be saved by applicants stating their cases clearly and succinctly.

No certificate will be issued until the fee of one dollar is paid in advance. It will also be remembered that the finances of the Board are exceedingly limited, and correspondents will please see that the postage is fully prepaid on their communications. It is much better that diplomas sent to the Board for verification be forwarded by express than by mail. The office of the Board, for the present, is at Chicago.

The hearty coöperation of all medical practitioners in good standing is expected. It is not alone a duty they owe to the people, but a matter of interest to themselves, as it is the determination of the Board to protect and advance the legitimate practitioner.

"COLLEGE OF PHYSICIANS AND SURGEONS, CITY OF KEOKUK, IOWA."—The LEADING announcement of the medical schools of this country is issued by the college bearing the above name. Its announcement "leads" in several particulars. It "leads," for instance, in pretentiousness, it "leads" in magnificence of proof-errors, it "leads" in extreme economy of expense incurred in its production, it "leads" in the horrible taste displayed in a three-inch cut, most diabolically executed, affording a "view of one of the college dissecting rooms." The cut represents an apartment "over 50 feet in length," containing eight tables, an old pewter injecting syringe of the pattern used sixty-five years ago, a student at a table, a demonstrator, presumably on foot, "attitudinizing" for a photograph, a janitor, a blown-up, shriveled gut on a gas-pipe, eight cadavers in various stages of disappearance, one of them in a position for perineal dissection, with a urethral sound *in situ*, two skulls, a dead baby, and an infinitude of cracks in the floor. The announcement "leads" in other particulars: in general information, for example, concerning the city of Keokuk itself. We are informed that Keokuk is "one of the most beautiful cities in the Mississippi Valley;" that "it is the location of the great ship canal around the Des Moines rapids of the Mississippi, which has been formally opened" (evidently the canal is here meant), "and has cost our government over four millions of dollars,"—both of which items of general information are of incalculable value to the student attending lectures in the College of Physicians and Surgeons, City of Keokuk, Iowa. The announcement "leads" also in the variety of text-books recommended, which "may be purchased at reasonable prices at the extensive bookstores of our city"—(prices are, of course, not "reasonable" at "the bookstores of our city", which are not "extensive"). Here are recommended, *e. g.*, "*Cruolhier's*" Anatomy, "*Kliss'*" Physiology, "*Bartholind's*" Materia Medica, "*Cazeau's*" Obstetrics, "*Deon's*" Medical Jurisprudence, "*Rockatansky's*" Pathological Anatomy, and other books too numerous to mention.

THE particular, however, in which this document "leads" is in the announcement of the virtues of the college in question,

which announcement is without parallel in this or in any other country of the globe, in the stupendousness of its disregard for the ways of good grammar. Copies of this announcement should be forwarded at once to the various university historical libraries of the country, not forgetting that of the Surgeon General's office, for preservation and future reference.

After announcing in hackneyed terms "the continued prosperity and success of the Institution," we are treated to this grammatical effusion :

"No words of ours can be half so convincing to the physician or medical student, who wishes to attend a course of medical lectures, of the usefulness and success of the Institution, than by reference to our one thousand Alumni, whose names are herewith presented, and whose medical reputation and influence is felt throughout the entire Northwest."

We are informed that the faculty at Keokuk can "look off and lecture without notes;" that they deliver "*extemporaneous lectures*," and this is why such lectures are an advantage : "Years of experience has proved the great advantage of *extemporaneous* lectures over those *written and read* before the medical student." We are also informed "that the College of Physicians and Surgeons offer greater inducements to the student, and at less cost, than any other regular Institution in the country." We learn here also that an "*Ad Euendum* Degree" is conferred when occasion requires.

Enough is as good as a feast. More quotations from this remarkable announcement might discourage the publication of others. We trust that no one will impudently suggest that the Trustees of the "College of Physicians and Surgeons, City of Keokuk, Iowa," add a Professor of Grammar and Rhetoric to their Faculty.

WALSH'S PHYSICIANS' CALL-BOOK, AND HANDY LEDGER.—The *Call Book* has reached its third edition. The astonishing rapidity with which it has become a great favorite with the profession is the best proof of its merits. The *Handy Ledger* is another proof of Dr. Walsh's knowledge of the practical needs of the profession. Physicians, as a rule, are not very good business men nor have they the time requisite to keep their

account books in a business-like manner. The *Handy Ledger* now offers a system of book-keeping so simple, yet complete, that the busiest physician needs but a few minutes per day to keep his accounts posted up.

The call-book costs $1.50; the ledger, $2.50; both can be obtained of R. Walsh, M. D., 326 C street, Washington, D. C.

THE ILLINOIS STATE MEDICAL REGISTER for 1877–8 is now ready, and can be obtained for one dollar and fifty cents by applying to Mr. W. T. Keener, 63 and 65 Washington street, Chicago.

The *Chicago Medico-Historical Society*, which has hitherto published an annual directory of Chicago physicians, has enlarged the scope of its work, and with the coöperation of the Illinois State Medical Society, issued a register of regular physicians in the entire State. The publication committee does not claim that the list comes any where near perfection, as in a first attempt at compiling such a list "the omission of worthy names and the admission of unworthy ones, are defects always unavoidable." The committee, therefore, solicits criticism and suggestions, by which the next edition could be improved.

Besides the list of physicians, the volume contains a great deal of valuable information; *e. g.*, Code of Ethics of the American Medical Association; Constitution and By-laws of the Illinois State Medical Society; complete list of the National, State, and County Medical Societies; A Directory of the Charitable and Benevolent Institutions, Hospitals and Dispensaries in Illinois; and a Digest of the Laws of the State of Illinois, and of the Ordinances and regulations of the City of Chicago, relating to public health and interesting the medical profession.

TO OUR SUBSCRIBERS.

With the conclusion of this volume expires the period of subscription of most of the names on our list. We shall be under obligations to those of our friends who will promptly remit to us their favors, either for the entire year or for the volume which will be concluded with the number of June, 1878.

We beg leave to call attention to the necessity of prompt remittances, as we can thus estimate for the future in such a way as to greatly improve the character of the JOURNAL.

OFFICIAL LIST of Licentiates of the Illinois State Board of Health who have qualified since the last announcement made in this JOURNAL:

COOK COUNTY.

Burrell, C. W		Chicago Medical College, March 12, 1872
Clark, A. B.,	Chicago	Chicago Medical College, March 21, 1876
Byford, Henry T.,	Chicago	Chicago Medical College, March 13, 1873
Park, Roswell,	"	Chicago Medical Chicago, March 21, 1876
Dyas, Geo. K.	"	Chicago Medical College, March 21, 1869
Bottomley, B. H.	"	Medical Department, Lind University, March 3, 1863
Sterl, Alexander,	"	University of the City of N. Y., March 5th, 1866
Braun, Louis,	"	Rush Medical College, Feb. 15, 1876
Smith, A. W.,	"	Eclectic Medical Institute, Cin. O., May 21, 1872
McElray, P. H.,	"	Rush Medical College, Feb. 1, 1871
Seiffert Rudolph,	"	University of Vienna, Austria, Feb. 13, 1852
Hutchinson, Jas. M.	"	Chicago Medical College, March 3, 1867
Hooper Henry	"	Harvard Medical College, June, 1869
Cole, Harlan P.,	"	N. Y. Homœopathic Medical College, March 3, 1872 Chicago Medical College March 14, 1871
Johnson, H. A.,	"	Rush Medical College, Feb., 1852
Williams, T. D.,	"	Hahnemann Medical College, Chicago, Feb. 23, 1871
Fellows, H. B.,	"	Western Homeo College, Cleveland, March 1, 1861
Ogden, E. J.,	"	The University of the City of N. Y. March 9, 1855 The Victoria College, Coburg, Canada, July 5, 1855
Ogden, Milton D-,	"	The Hahnemann Medical College, Chicago, Feb. 28, 1862
Wilder, F. M.,	"	The University of Michigan, March 25, 1868
Dexter, Ransom,	"	The University of Michigan, March 26, 1869
Copp, B. D.,	"	Rush Medical College, Feb. 1, 1871
Henrotin, F.,	"	Rush Medical College, Feb. 1, 1868

Degeller, John, " .....The University of Munich, Bavaria, June 9, 1864
Dovelittle, W. H. " .....Rush Medical College, Feb. 15, 1876
Root, D. S., " .....Rush Medical College, Jan. 25, 1867
Hall, Robt. T., " .....Rush Medical College, Jan. 17, 1872
Ware, Lyman, " .....Chicago Medical College, March 1, 1866
Wanzer, Hiram, " .....The Lind University, Chicago, March 12, 1861
Henry. C. P., " .....The University of Berlin, Prussia, July, 1859
Flood, John, " .....Bennett Elec Medical College, Chicago, Jan. 26, 1873
Jenner, Herman, " .....The University of Munich, Bavaria, March 6, 1875
Twining, S. D., " .....The Medical Department, Yale College, Jan. 14, 1864
Hunt, William C. " .....Rush Medical College, Feb. 22, 1852
Bluthardt, T. J. " .....The Lind University, Chicago, March 4, 1861
Baldwin, H. N., " .....Hahnemann Medical College, Chicago, Feb. 22, 1877
Kelly, F. W. " ..... { The Medical Dep't University of Vermont, ...Burlington, Vt., March, 1860
Baker, Sibelia F. Chicago....Female Medical College, Philadelphia, Pa., March 12, 1870
Duncanson, A. A., " ....Western Homeopathic Med. Coll. Cleveland, Mar. 10, 1858
Drake. Thos. B., " .....Albany Medical Collega, Albany, N, Y., June 7, 1857
Young. Henry N., " .....Jefferson Medical College, Philadelphia, March 8, 1856
Stockham, G. H., " ....Eclectic Medical Institute, Cincinnati, Ohio, March 2, 1856
Taylor, W. W., " .....University of Louisville, Ky., March 31, 1871
Fisher, John C., " ..Long Island College Hospital, Brooklyn, N. Y., June 22, 1876
Fredigke, J. G., " .....Chicago Medical College. March, 5, 1867
Dodge, Lewis, " ..Homeopathic Medical College of Pennsylvania, March 2, 1850
Bailey, Samuel G., " .....Jefferson Medical College, Philadelphia, March 20, 1844
Fischer, Gustavus " .....University of Prague, Bohemia, April 1, 1871
Willard, Geo. E., " .....Chicago Medical College, March, 10, 1874
Wolgamott, Geo. W., " .....University of Iowa, Keokuk, Iowa, Feb. 21, 1861
Strong, Albert B., " .....Rush Medical College, Jan. 17th, 1872
Taylor, Theo. T., " .....Kentucky School of Medicine, Louisville, March 1, 1869
Martin, William, " .....Chicago Medical College, March 5, 1867
Roler, E. O. F., " .....Rush Medical College, Feb. 16, 1859
Hulett, S. Eugene, " .....Hahnemann Medical College, Chicago, Feb. 10, 1876
Kerler, C. L., " .....University of Vienna, Vienna, Austria, April 23, 1854
Adama, Andrews, " .....The University of Heidleberg, Germany, May 4, 1856
Chapman, F. M., " .....Bennett Eclectic Medical College, Feb. 21, 1877
Bassett, George R., " .....Bennett Eclectic Medical College. Feb. 21, 1877
Champlin, A. H., " .....The University of Michigan, March 31, 1869
Heymann, H., " .....University of Bonn, Prussia, Aug. 18, 1860
Nelson, Daniel T., " .....Harvard Medical College, March 8, 1865
Chaffee, John B., " .....McDowell Medical College, St. Louis, March 20, 1861
Otto, Joseph, " .....Rush Medical College, Jan. 25, 1865
Hempstead. Chas. W., Chicago .....University of Pennsylvania, April 2, 1852
Ulrich, Julius, " .....University of Vienna, Austria, Aug. 15, 1847
Peak, Orin, Oak Park.....University of Michigan, March 30, 1854
Tucker, Dexter, M., Chicago.....Harvard Medical College, March 4, 1852
Otto, Joseph P., Irondale.....Chicago Medical College, March 13, 1873
Jewell, J. S., Chicago.....Lind University, Chicago, March 11, 1860
Hathaway, R. W., " .....Syracuse Eclectic Medical College, March, 1850
Hobart, H. M., " .....Hahnemann Medical College, Chicago, Feb. 10, 1876
Blanchard, Wallace, Chicago.....Chicago Medical College, March, 1869
Gibbs, Lucius O., " .....Bennett Eclectic Medical College, May 20, 1873
Dyas, W. G., Chicago.....The Royal College of Surgeons, Dublin, Jan. 7, 1845
Quinlan, C. H., " .....Rush Medical College, February, 1865
Van Doozer, B. R., Chicago.....Chicago Medical College, March 12. 1868
Piero, F. L., " .....University of Vermont, Burlington, Vt., May 15, 1866
Mauro, Andrea, " .....University of Naples, Naples, Italy, Sept. 5, 1861
Bate, John, " .....Bennett Eclectic Medical College, March 2, 1876

Davies, W. H.,	"	.....The Eclectic Medical College, Cincinnati, Feb. 14, 1865
Dodge, David,	"	.....The Columbian College, D. C., March 2, 1841 .....Rush Medical College, Jan. 20, 1871
McCarthy, William	"	..... The McGill Medical College, Montreal, May 3, 1687
Meloney, William B.,	"	.....The University of Michigan, Ann Arbor, March 20, 1864
Morey, A. C.,	"	.....Jefferson Medical College, Philadelphia, March, 7, 1857
Skelton, Elizabeth D.,	"	The Woman's Hospital Med. College, Chicago, March 2, 1875
Hurlbut, H. N..	"	Licentiate of Ashtabula College, Ohio Med. Soc., Feb. 25, 1331; The Willoughby University, Willoughby, O., Feb. 20, 1840
Bottsford, Harriette A.,	"	.....Female Medical College. Philadelphia, March 12, 1875
Davies, Charles G.,	"	....The University of Virginia, Charlottsville, July 3, 1878 .....and Missouri Medical College, March 11, 1874
Fry, Isaac H.,	"	... .Chicago Medical College, Chicago, March 21, 1876
McArthur, R. D.,	"	....McGill University, Montreal, Canada, May 3, 1867
Ely, Charles Franklin,	"	N. Y. Homeopathic Medical Coll., N. Y. city, March 11, 1877
Harcourt, Luke A.,	"	.....University of Buffalo, N. Y., Feb. 25, 1868
Wisner, Sarah D.,	"	Hahnemann Medical College, Chicago, Chicago, Feb. 4, 1877

OTHER COUNTIES.

Chapman, P. E., Sigel, Shelby.....Louisville Medical College, Feb. 28, 1873
Dunn, L. D., Moline, Rock Island.....Rush Medical College, Feb. 18, 1857
Klingberg, A., Moline, Rock Island.....Rush Medical College, Feb. 3, 1869
Morey, J. W., Moline, Rock Island..... ...Rush Medical College, January 25, 1867
Davison, J. B., Moline, Rock Island.....Jefferson Medical College, Phila., March 7, 1868
Ellis, D. E., Belvidere, Boone.....Geneva Medical College, Geneva, N. Y., Jan. 24, 1843
Scott, Charles, Belvidere, Boone..... ..Rush Medical College, February 16, 1865
Ehrlich, H. R., Lincoln, Logan.....College of Phy. & Sur., Keokuk, Iowa, Feb. 20, 1872
Miller, George H., Galena, JoDaviess.....Rush Medical College, February 17, 1874
McPherson, J. B., Gilman, Iroquis.....University of Edinburgh, Scotland
Brockhart, Louis, Majority Point, Cumberland.....Rush Medical College, 1858
Eskridge, J. H., Majority Point, Cumberland...Rush Medical College, February 15, 1876
Trabue, J. W., Shipman, Macoupin.....Rush Medical College, February 21, 1855
David, Cyrenius A., Sheridan, LaSalle.....Rush Medical College, February 3, 1869
McCaudless, W. L., Perry.. .....Rush Medical College, January 17, 1872
Merrick, G. C., Manteno, Kankakee..... .....Rush Medical College, February 20, 1851
Mitchell, R. J.. Girard, Macoupin.... ....Rush Medical College, February 1, 1871
Macklin, George M., Waterman, DeKalb.....Rush Medical College, February I, 1871
Jay, Hollis, Makena, Will.....Cincinnati Eclectic Medical College, April 4, 1859
Johnson, Wm. C., Springfield, Sangamon.....Rush Medical College, February 3, 1869
Green, George, Bristol, Kendall.....Rush Medical College, February 2, 1870
Ralph, John B., Rock Falls, Whiteside.....Rush Medical College, February 3, 1869
Ray, Robert B., Fairmount, Vermilion,.. .....Rush Medical College, February 15, 1860
McVey, Rich'd E., Waverly, Morgan.....Rush Medical College, February 25, 1861
Morse, Simon P., Cambridge, Henry..... Rush Medical College, February 2. 1870
Kinnear, A. H., Metamora, Woodford.... .....Rush Medical College, January 27, 1864
Koch, Charles L., Quincy, Adams.....Rush Medical College, February 27, 1877
Kerr, Charles, Pawnee, Sangamon.....Rush Medical College, January 25, 1865
Bartlett, A. I., Virden, Macoupin.....Rush Medical College, February 4, 1862
Barry, E. L. H., Jerseyville, Jersey.....Rush Medical College, February 15, 1860
Brown, Wm. C., Geneseo, Henry... .....Rush Medical College, February 25, 1861
Wilson, Benj., Chambersburg, Pike.....Rush Medical College, February 18, 1857
Clarke, Wesley, Dix, Marion.....Rush Medical College, January 25, 1867
Wheeler, M. S., Auburn, Sangamon..... .Rush Medical College, February 5, 1868
Elder, S. S., Farm Ridge, LaSalle.....Rush Medical College, January 25, 1865
Cochran, W. G., Farmer City, De Witt.....Rush Medical College, February 3, 1869
Clark, A. L., Elgin, Kane....Eclectic Medical Institute, Cincinnati, O., February 6, 1861
Harris, H. L., Fossland, Champaign.....Rush Medical College, February 16, 1875
Hurd, D. L., Earlville, LaSalle...Bennett Ecclectic Med. College, Chicago, May 26, 1870

Newkirk, G., Washburn, Woodford.....Rush Medical College, February 5, 1868
Taylor, John J., Streator, LaSalle.....Rush Medical College, January 25, 1867
Tebo, George H,, Mt. Sterling, Brown.....Rush Medical College, January 17, 1872
Tweddale, James, Washburn, Woodford .....Rush Medical College, February 3, 1869
Smith, E. R., Edgington, Rock Island..... ...Rush Medical College, February 15, 1876
Stetson, J. R., Sheffield, Bureau..... Rush Medical College, February 2, 1870
Drennan, D. A., Springfield, Sangamon.....Rush Medical College, February 16, 1875
Farrar, L. B., Paxton, Ford.....Berkshire Medical College, November 8, 1848
Farrar, Laura E., Paxton, Ford.....Hahnemann Medical College, Chicago, 1872
Pomeranc, Marx, Huntley, McHenry..The University of Wirceberg, Bavaria, Apl. 1, 1866
Johnson, J. P., Peoria, Peoria.....The Ohio Medical College, March 1, 1859
Lucas, B. C. K , Peoria, Peoria.....The Long Island Col. Hosp., Brooklyn, June 24, 1875
Brown, J. L., Peoria, Peoria.....Ohio Medical College, Cincinnati, O., March 2, 1868
Mitchell, J. A., Peoria, Peoria....Jefferson Medical College, Philadelphia, March 10, 1872
Lucas, George L., Peoria, Peoria.....Jefferson Medical College. Phila., March 6, 1852
Du Mars, R. A., Peoria. Peoria.....Med. Dept. University of Penna., March 12, 1876
Ballou, N. E. Sandwich, DeKalb..... ...Berkshire Medical College, Nov. 10, 1846
Gatchell, H. P., Jr., Highwood, Lake.. ...Hahnemann Med. Col., Chicago, Feb. 3, 1875
Lingood, John R., Rossville, Vermilion.....University of Penna., March 13, 1873
Knapp, James B., Bardolph, McDonough.....University of Buffalo—no date
Molitor, Nickolaus J., Somonauk, DeKalb.....Rush Medical College, July 1, 1869
Barnett, Charles F., Bunker Hill, Macoupin.....Rush Medical College, January 21, 1863
McPherson, M. C., Polo, Ogle.....Rush Medical College, January 17, 1872
Secord, James K., Elmwood, Peoria..... ....Rush Medical College, January 25, 1867
Dafoe, P. V. R., Elmwood, Peoria.....Victoria Med. Col., Ont., Canada, March 4, 1864
Thompson, Wm., Elmwood, Peoria..Bellevue Hosp. Med. Col., N. Y. City, March 1, 1874
McLean, John, DuQuoin, Perry.....Rush Medical College, January 1, 1863
Lake, Leonard L., Belvidere, Boone.....Rush Medical College, February 18, 1847
Williamson, George, Belvidere, Boone.....Rush Medical College, February 3, 1869
Felker, John B., Amboy, Lee.....Rush Medical College, February 15, 1860
Sikes, H. B., Bardolph, McDonough..... .....Detroit Medical College, July10, 1872
Saunders, R. A., Galesburg, Knox.....St. Louis Medical College, March, 1849
Gibson, Robert, Alton, Madison.....Missouri Medical College, March 4, 1875
Rafferty, T. A., Robinson, Crawford.....Ohio Medical College, March 1, 1869
Thomson, Jno. S., Robinson, " .....Rush Medical College, Feb. 19, 1873
Ferguson, S. T., Minooka, Grundy ..... " " " Jan. 25, 1865
Henry, Robt. F., Princeville, Peoria..... " " " Feb. 16, 1853
True, Chas., Chatsworth, Livingston... ..... " " " Jan. 24, 1865
Holgate, James, Castleton, Stark ..... " " " Feb. 3, 1869
Wright, Nehemiah, Chatham, Sangamon..... " " " Jan. 25, 1865
Woods, D. L., Streator, LaSalle..... " " " Feb. 5, 1868
Chenoweth, C., Decatur, Macon.....Rush Medical College, Feb. 3, 1869
Chenowith, W. J. " " .....University of Louisville, March 3, 1853
Stephens, B. J., Mt. Morris, Ogle,.....Rush Medical College, Feb. 7, 1850
Marshall, N. R. Clifton, Iroquois.....Rush Medical College, Jan. 26, 1867
Ross, B. F., Cobden, Union.....Rush Medical College, Feb. 17, 1858
Donaldson, H. C., Morrison, Whiteside.....Rush Medical College, Feb. 20, 1831
Brumagim, R. J., Morrison, Whiteside.....Castlebon Medical College, Oct. 25, 1846
Taylor Samuel, Morrison, Whiteside.....Cleveland Medical College, Feb. 22, 1844
Richings, Chas. H. Rockford, Winnebago.....Rush Medical College, Feb. 12, 1849
Kreider, Wm. L., Aaron, McDonough.....Rush Medical College, Feb. 16, 1859
Kreider, Henry W., Aaron, McDonough.....Rush Medical College, Feb. 20, 1856
Davis, A. P., Paris, Edgar..... ...Rush Medical College, Jan. 25, 1867
Ramsey, Geo. W., Putnam Co.....Rush Medical College, Feb. 15, 1876
Dubler, W. H., Windsor, Shelby.....Rush Medical College, Jan. 25, 1865
Brunk, Chas. H., Windsor, Shelby..... .....Rush Medical College, Jan. 25, 1865
Hilsabeck, W. F., Windsor, Shelby.....Rush Medical College, Jan. 17, 1872
Thompson, S. C., Cedarville, Stephenson.....Rush Medical College, Jan. 17, 1872

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Dec. 3, 17 and 31.
Chicago Society of Physicians and Surgeons—Mondays, Dec. 10 and 24.

CLINICS.

MONDAY.
Eye and Ear Infirmary—2 to 4 P. M., by Prof. Holmes and Dr. Hotz.
Mercy Hospital—2 to 3 P. M. Surgical, by Prof. Andrews.
Rush Medical College—1:30 P. M. Medical, by Dr. Bridge.
County Hospital—8 P. M. Necropsy, by Dr. Danforth.
Woman's Medical College—3 P. M. Surgical, by Prof. Owens.

TUESDAY.
County Hospital—1:30 P. M. Medical, by Prof. Bevan; 2:30 P. M. Surgical, by Dr. Bogue.
Mercy Hospital—2 P. M. Medical, by Prof. Hollister.
Eye and Ear Infirmary—2 P. M. Prof. Jones.

WEDNESDAY.
County Hospital—1:30 P. M. Gynecological, by Prof. Fitch; 2:30 P. M. Ophthalmological, by Dr. Montgomery.
Mercy Hospital—2 P. M. Eye and Ear, by Prof. Jones.
Rush Medical College—4 P. M. Diseases of the Chest, by Prof. Ross.

THURSDAY.
Mercy Hospital—2 P. M. Medical, by Prof. Davis.
Rush Medical College—1:30 P. M. Neurological, by Prof. Lyman.
Eye and Ear Infirmary—2 to 4 P. M. Operations, by Prof. Holmes and Dr. Hotz.

FRIDAY.
Mercy Hospital—2 P. M. Medical, by Prof. Davis.
County Hospital—1:30 P. M. Medical, by Prof. Ross; 2:30 P. M., Surgical, by Prof. Gunn.
Woman's Medical College—10 P. M. Ophthalmological, by Dr. Montgomery.

SATURDAY.
Rush Medical College—2 P. M. Surgical, by Prof. Gunn.
Chicago Medical College—2 P. M. Surgical, by Prof. Andrews and Isham; 3 P. M., Diseases of Chest, by Prof. Johnson.
Woman's Medical College—12 M. Gynecological, by Prof. Fitch; 3 P. M. Dermatological, Dr. Maynard.

Special Clinics daily, from 2 to 4 P. M., at the South Side Dispensary, and at the Central Free Dispensary.
For schedule of lectures at the colleges, apply to the college janitors.